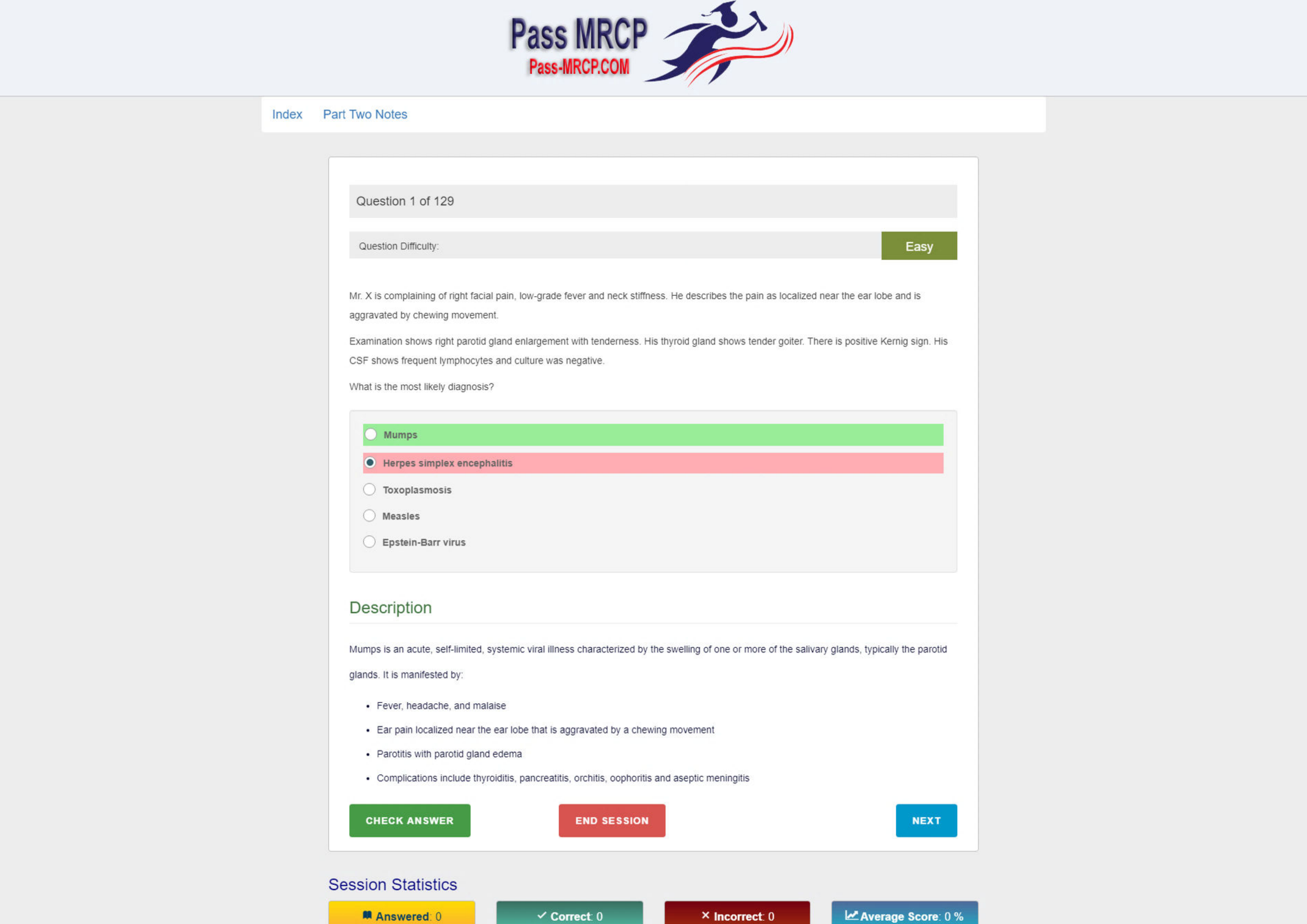


Question 1 of 129

Question Difficulty: Easy

Mr. X is complaining of right facial pain, low-grade fever and neck stiffness. He describes the pain as localized near the ear lobe and is aggravated by chewing movement.

Examination shows right parotid gland enlargement with tenderness. His thyroid gland shows tender goiter. There is positive Kernig sign. His CSF shows frequent lymphocytes and culture was negative.

What is the most likely diagnosis?

○ **Mumps**
● **Herpes simplex encephalitis**
○ **Toxoplasmosis**
○ **Measles**
○ **Epstein-Barr virus**

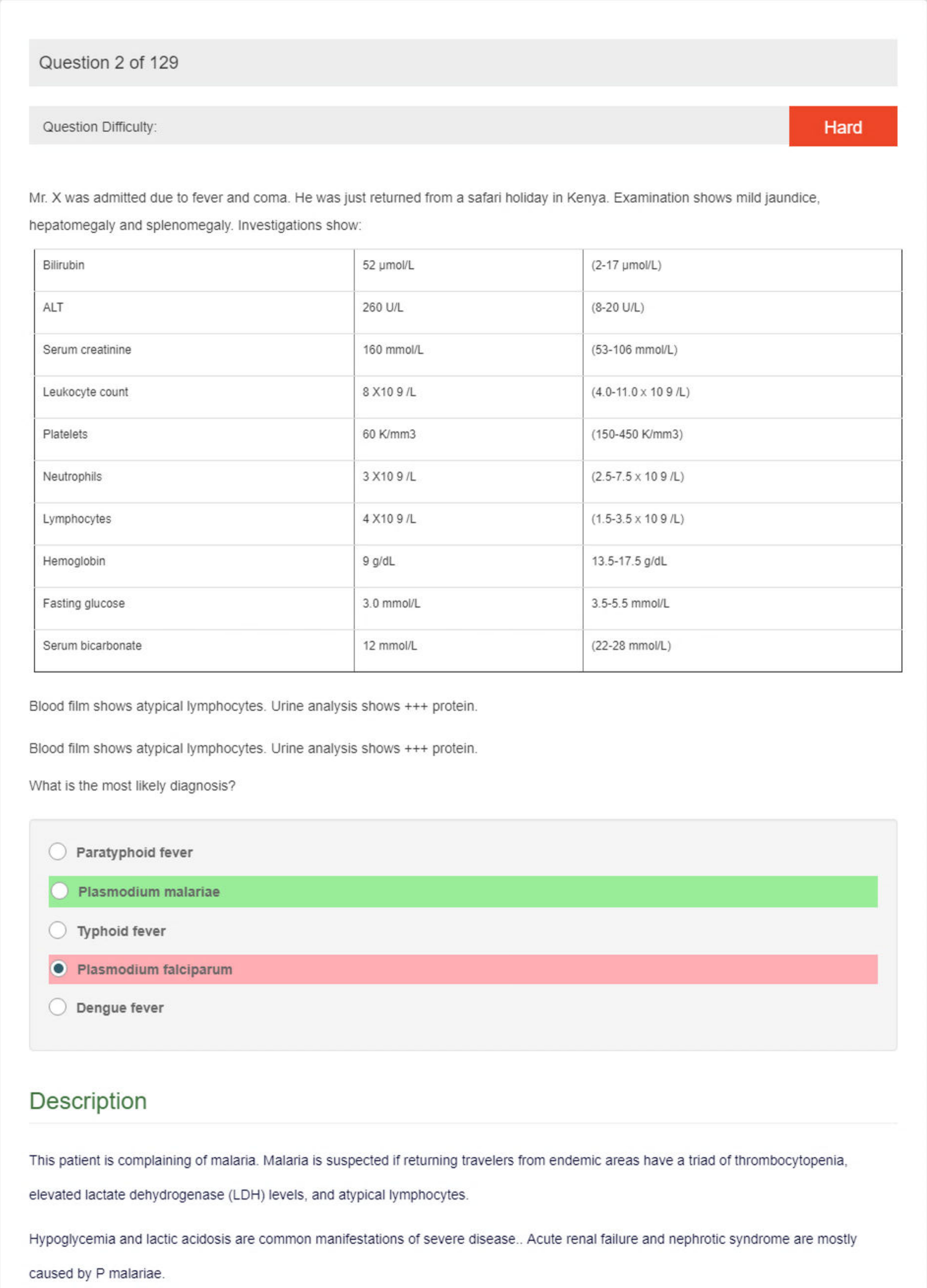
## Description

Mumps is an acute, self-limited, systemic viral illness characterized by the swelling of one or more of the salivary glands, typically the parotid glands. It is manifested by:

- Fever, headache, and malaise
- Ear pain localized near the ear lobe that is aggravated by a chewing movement
- Parotitis with parotid gland edema
- Complications include thyroiditis, pancreatitis, orchitis, oophoritis and aseptic meningitis

## Session Statistics

**Answered**: 0
✓ **Correct**: 0
✕ **Incorrect**: 0
**Average Score**: 0 %



Question 2 of 129

Question Difficulty: **Hard**

Mr. X was admitted due to fever and coma. He was just returned from a safari holiday in Kenya. Examination shows mild jaundice, hepatomegaly and splenomegaly. Investigations show:

| | | |
|---|---|---|
| Bilirubin | 52 µmol/L | (2-17 µmol/L) |
| ALT | 260 U/L | (8-20 U/L) |
| Serum creatinine | 160 mmol/L | (53-106 mmol/L) |
| Leukocyte count | 8 X10 9 /L | (4.0-11.0 x 10 9 /L) |
| Platelets | 60 K/mm3 | (150-450 K/mm3) |
| Neutrophils | 3 X10 9 /L | (2.5-7.5 x 10 9 /L) |
| Lymphocytes | 4 X10 9 /L | (1.5-3.5 x 10 9 /L) |
| Hemoglobin | 9 g/dL | 13.5-17.5 g/dL |
| Fasting glucose | 3.0 mmol/L | 3.5-5.5 mmol/L |
| Serum bicarbonate | 12 mmol/L | (22-28 mmol/L) |

Blood film shows atypical lymphocytes. Urine analysis shows +++ protein.

Blood film shows atypical lymphocytes. Urine analysis shows +++ protein.

What is the most likely diagnosis?

○ **Paratyphoid fever**

○ **Plasmodium malariae**

○ **Typhoid fever**

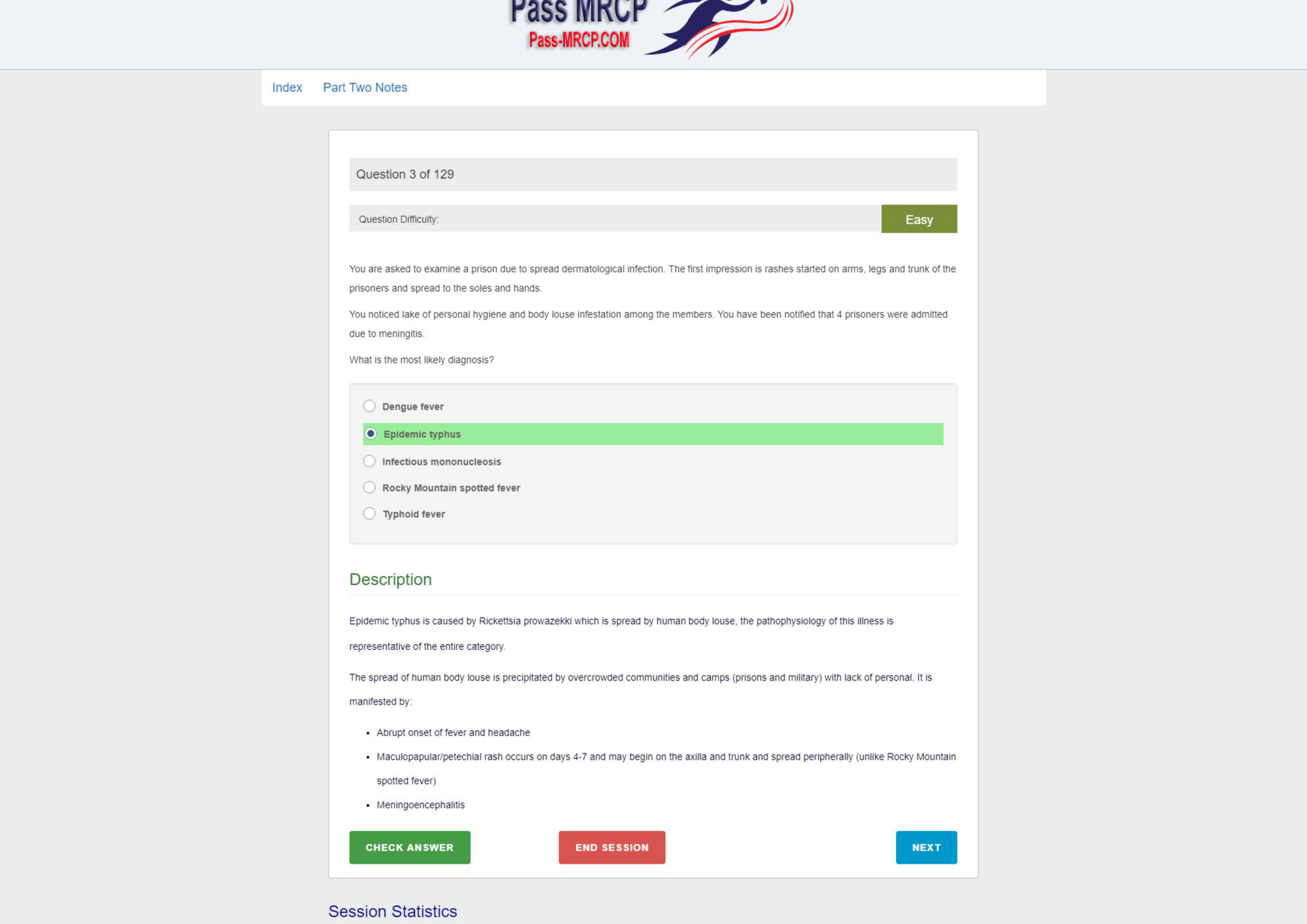
● **Plasmodium falciparum**

○ **Dengue fever**

## Description

This patient is complaining of malaria. Malaria is suspected if returning travelers from endemic areas have a triad of thrombocytopenia, elevated lactate dehydrogenase (LDH) levels, and atypical lymphocytes.

Hypoglycemia and lactic acidosis are common manifestations of severe disease.. Acute renal failure and nephrotic syndrome are mostly caused by P malariae.



Question 3 of 129

Question Difficulty: Easy

You are asked to examine a prison due to spread dermatological infection. The first impression is rashes started on arms, legs and trunk of the prisoners and spread to the soles and hands.

You noticed lake of personal hygiene and body louse infestation among the members. You have been notified that 4 prisoners were admitted due to meningitis.

What is the most likely diagnosis?

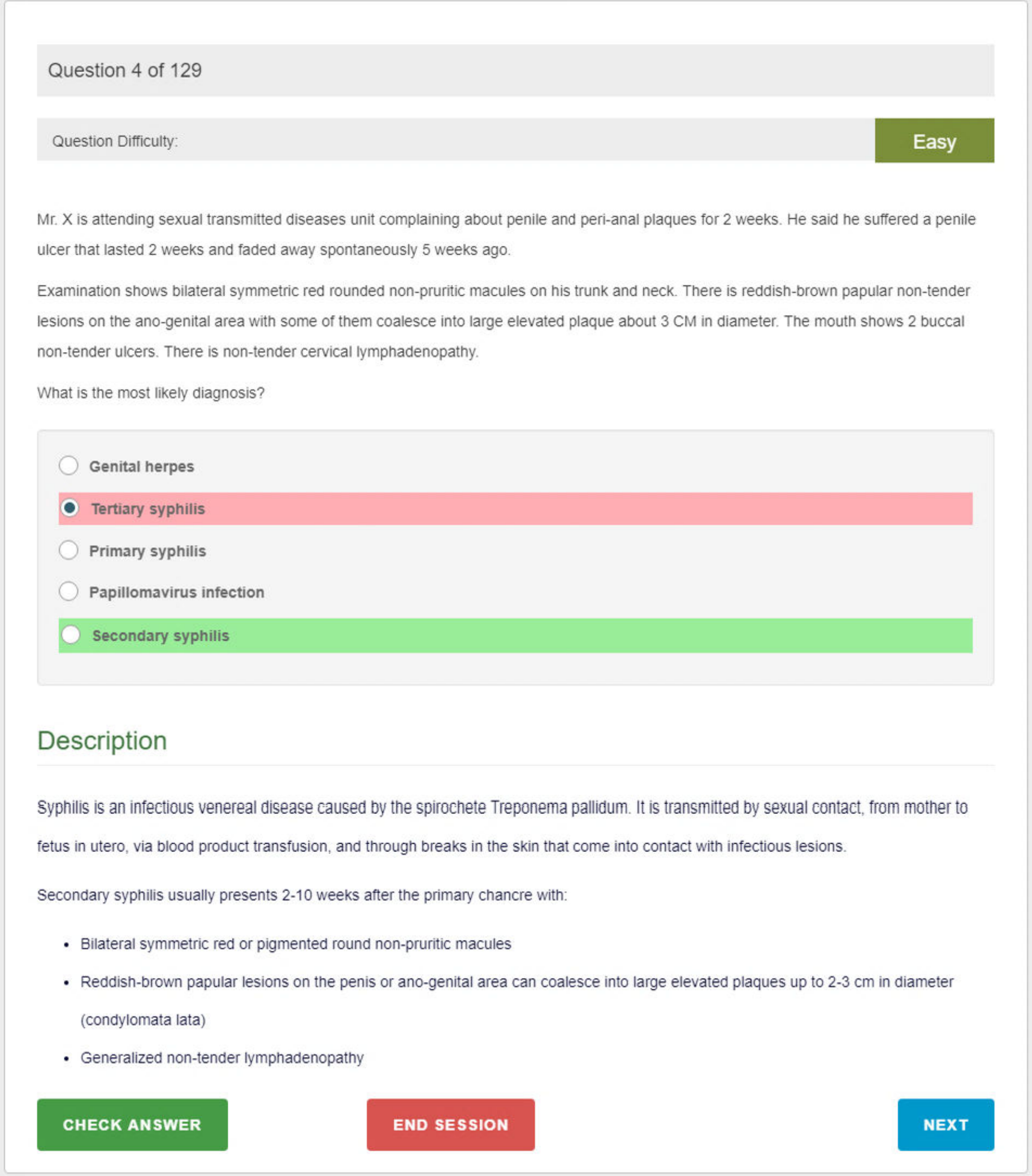
○ Dengue fever
● Epidemic typhus
○ Infectious mononucleosis
○ Rocky Mountain spotted fever
○ Typhoid fever

## Description

Epidemic typhus is caused by Rickettsia prowazekki which is spread by human body louse, the pathophysiology of this illness is representative of the entire category.

The spread of human body louse is precipitated by overcrowded communities and camps (prisons and military) with lack of personal. It is manifested by:

- Abrupt onset of fever and headache
- Maculopapular/petechial rash occurs on days 4-7 and may begin on the axilla and trunk and spread peripherally (unlike Rocky Mountain spotted fever)
- Meningoencephalitis



Question 4 of 129

Mr. X is attending sexual transmitted diseases unit complaining about penile and peri-anal plaques for 2 weeks. He said he suffered a penile ulcer that lasted 2 weeks and faded away spontaneously 5 weeks ago.

Examination shows bilateral symmetric red rounded non-pruritic macules on his trunk and neck. There is reddish-brown papular non-tender lesions on the ano-genital area with some of them coalesce into large elevated plaque about 3 CM in diameter. The mouth shows 2 buccal non-tender ulcers. There is non-tender cervical lymphadenopathy.

What is the most likely diagnosis?

○ **Genital herpes**

● **Tertiary syphilis**

○ **Primary syphilis**

○ **Papillomavirus infection**

○ **Secondary syphilis**

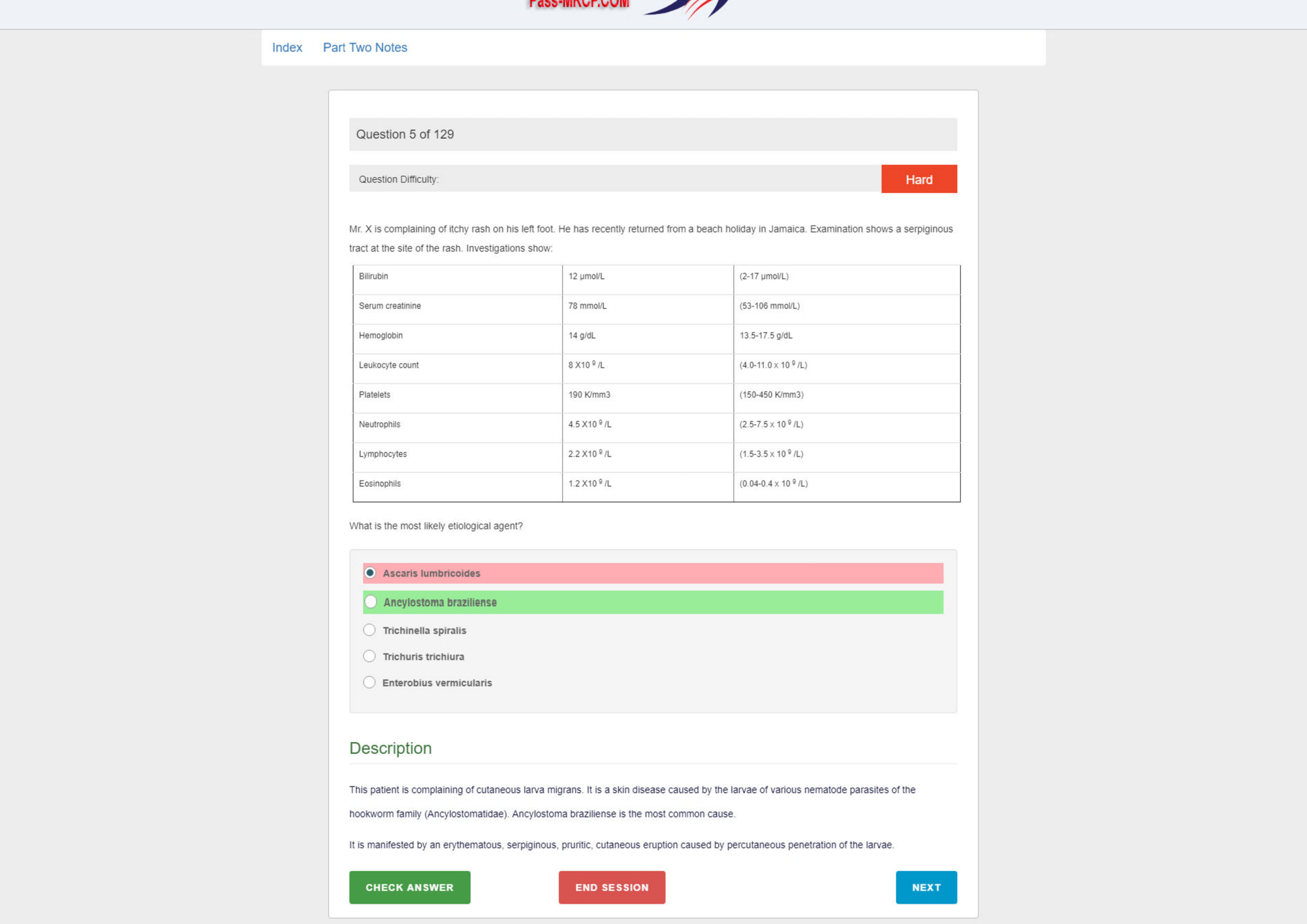
## Description

Syphilis is an infectious venereal disease caused by the spirochete Treponema pallidum. It is transmitted by sexual contact, from mother to fetus in utero, via blood product transfusion, and through breaks in the skin that come into contact with infectious lesions.

Secondary syphilis usually presents 2-10 weeks after the primary chancre with:

- Bilateral symmetric red or pigmented round non-pruritic macules
- Reddish-brown papular lesions on the penis or ano-genital area can coalesce into large elevated plaques up to 2-3 cm in diameter (condylomata lata)
- Generalized non-tender lymphadenopathy

## Session Statistics



Question 5 of 129

Question Difficulty: **Hard**

Mr. X is complaining of itchy rash on his left foot. He has recently returned from a beach holiday in Jamaica. Examination shows a serpiginous tract at the site of the rash. Investigations show:

| | | |
|---|---|---|
| Bilirubin | 12 µmol/L | (2-17 µmol/L) |
| Serum creatinine | 78 mmol/L | (53-106 mmol/L) |
| Hemoglobin | 14 g/dL | 13.5-17.5 g/dL |
| Leukocyte count | 8 X10 $^{9}$ /L | (4.0-11.0 x 10 $^{9}$ /L) |
| Platelets | 190 K/mm3 | (150-450 K/mm3) |
| Neutrophils | 4.5 X10 $^{9}$ /L | (2.5-7.5 x 10 $^{9}$ /L) |
| Lymphocytes | 2.2 X10 $^{9}$ /L | (1.5-3.5 x 10 $^{9}$ /L) |
| Eosinophils | 1.2 X10 $^{9}$ /L | (0.04-0.4 x 10 $^{9}$ /L) |

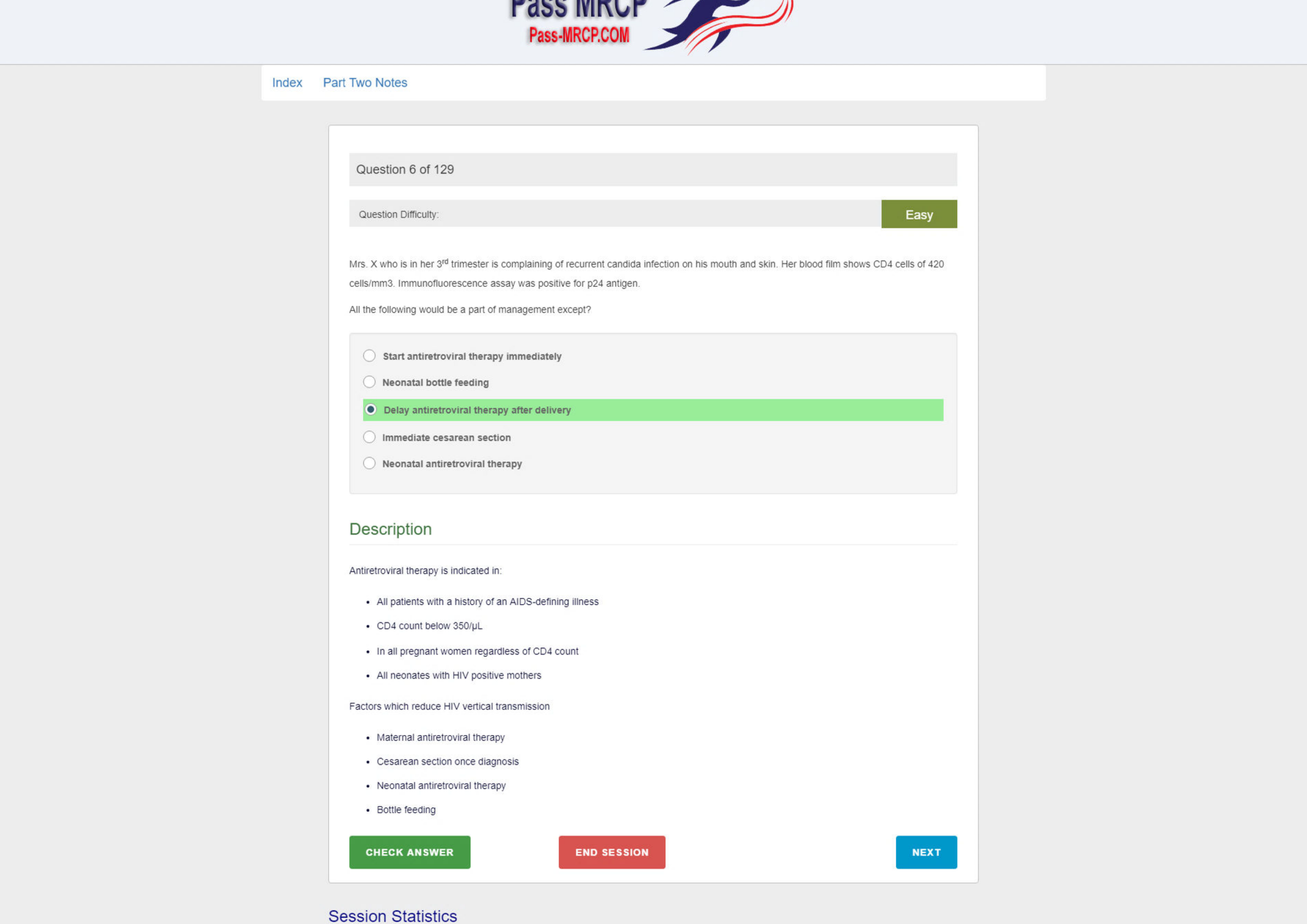
What is the most likely etiological agent?

- ● **Ascaris lumbricoides**
- ○ **Ancylostoma braziliense**
- ○ **Trichinella spiralis**
- ○ **Trichuris trichiura**
- ○ **Enterobius vermicularis**

## Description

This patient is complaining of cutaneous larva migrans. It is a skin disease caused by the larvae of various nematode parasites of the hookworm family (Ancylostomatidae). Ancylostoma braziliense is the most common cause.

It is manifested by an erythematous, serpiginous, pruritic, cutaneous eruption caused by percutaneous penetration of the larvae.



Question 6 of 129

Question Difficulty: Easy

Mrs. X who is in her 3$^{rd}$ trimester is complaining of recurrent candida infection on his mouth and skin. Her blood film shows CD4 cells of 420 cells/mm3. Immunofluorescence assay was positive for p24 antigen.

All the following would be a part of management except?

○ **Start antiretroviral therapy immediately**
○ **Neonatal bottle feeding**
● **Delay antiretroviral therapy after delivery**
○ **Immediate cesarean section**
○ **Neonatal antiretroviral therapy**

## Description

Antiretroviral therapy is indicated in:

- All patients with a history of an AIDS-defining illness
- CD4 count below 350/μL
- In all pregnant women regardless of CD4 count
- All neonates with HIV positive mothers

Factors which reduce HIV vertical transmission

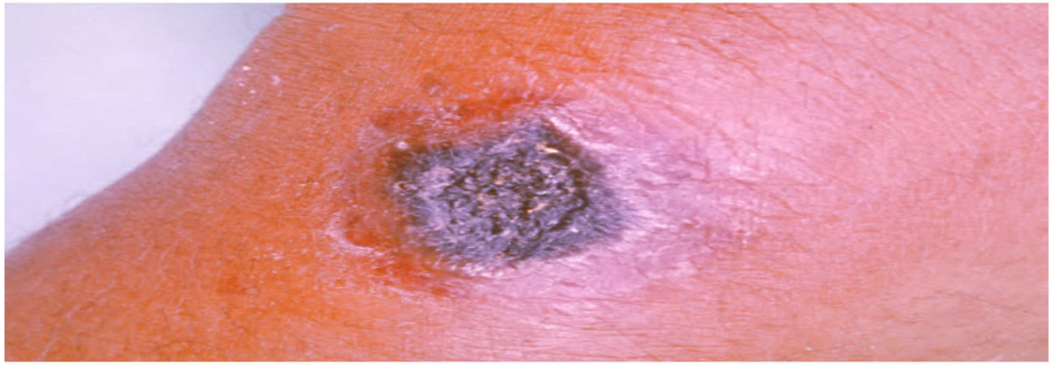
- Maternal antiretroviral therapy
- Cesarean section once diagnosis
- Neonatal antiretroviral therapy
- Bottle feeding

Question 7 of 129

Question Difficulty: **Easy**

Mr. X is admitted to the ED due rapidly deteriorating dyspnea with fever and hemoptysis. His friend mentions he has eaten a row meat 6 hours ago.

Examination shows fever of 39.5 C, BP of 90/60 and O2 saturation of 78%. There is skin ulcer shown in the image. There enlarged tender cervical lymphadenopathy.



What is the most likely diagnosis?

- ● **Anthrax**
- ○ **Legionella**
- ○ **Infectious mononucleosis**
- ○ **CMV infection**
- ○ **Brucellosis**

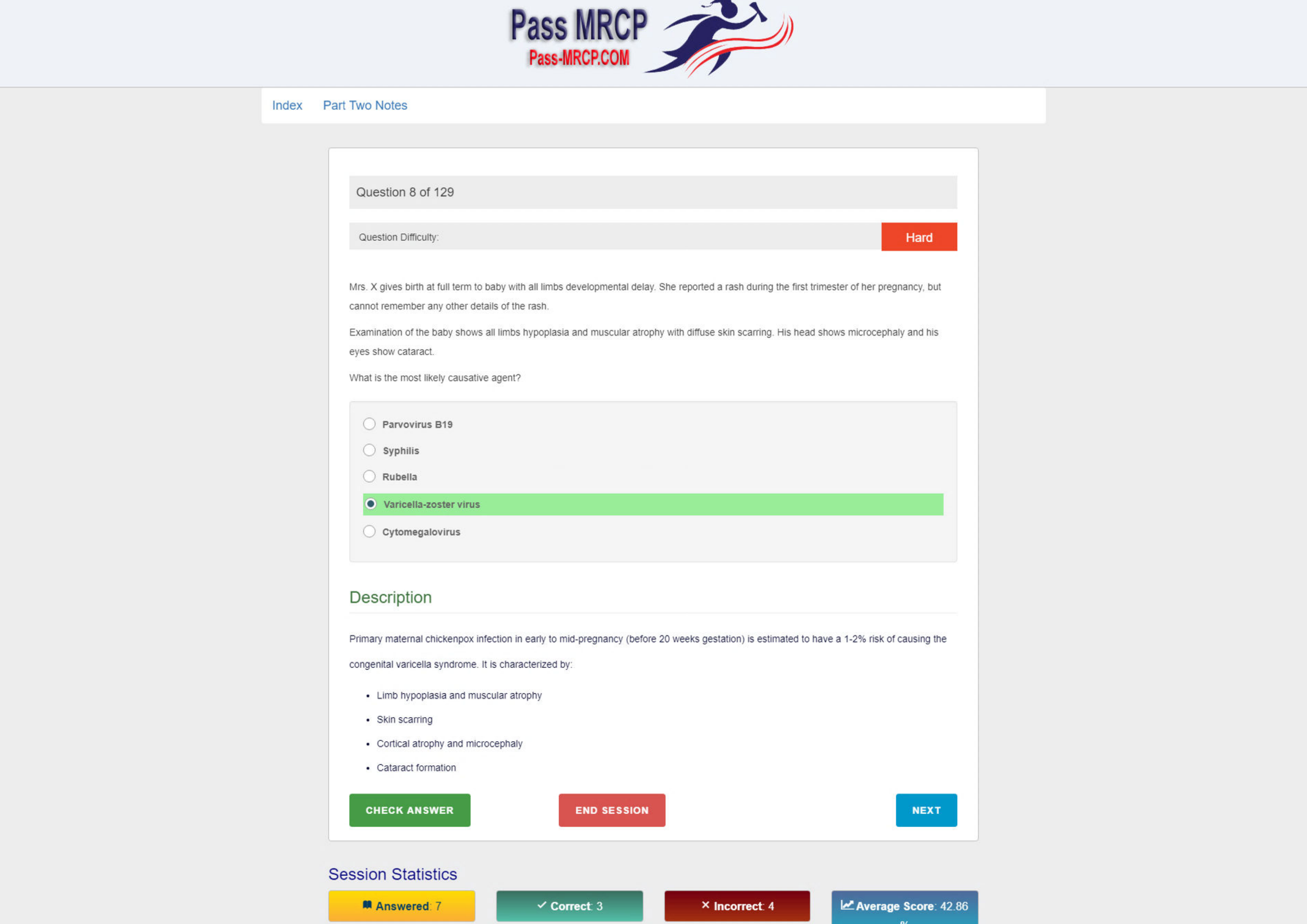
## Description

Anthrax is a zoonotic infection caused by Bacillus anthracis. Most anthrax is cutaneous (95%); the remaining cases are inhalational (5%) and gastrointestinal (< 1%).

Cutaneous anthrax begins as a and subsequently becomes an ulcer surrounded by an edematous halo then the ulcer evolve into a black painless Escher shown in the image within 7-10 days and last for 7-14 days before separating and leaving a permanent scar.

Inhalational anthrax progresses rapidly causing rapid clinical deterioration with high fever, dyspnea, cyanosis and hematemesis and complicated by hematogenous spread

CHECK ANSWER END SESSION NEXT



Question 8 of 129

Question Difficulty: **Hard**

Mrs. X gives birth at full term to baby with all limbs developmental delay. She reported a rash during the first trimester of her pregnancy, but cannot remember any other details of the rash.

Examination of the baby shows all limbs hypoplasia and muscular atrophy with diffuse skin scarring. His head shows microcephaly and his eyes show cataract.

What is the most likely causative agent?

○ **Parvovirus B19**
○ **Syphilis**
○ **Rubella**
● **Varicella-zoster virus**
○ **Cytomegalovirus**

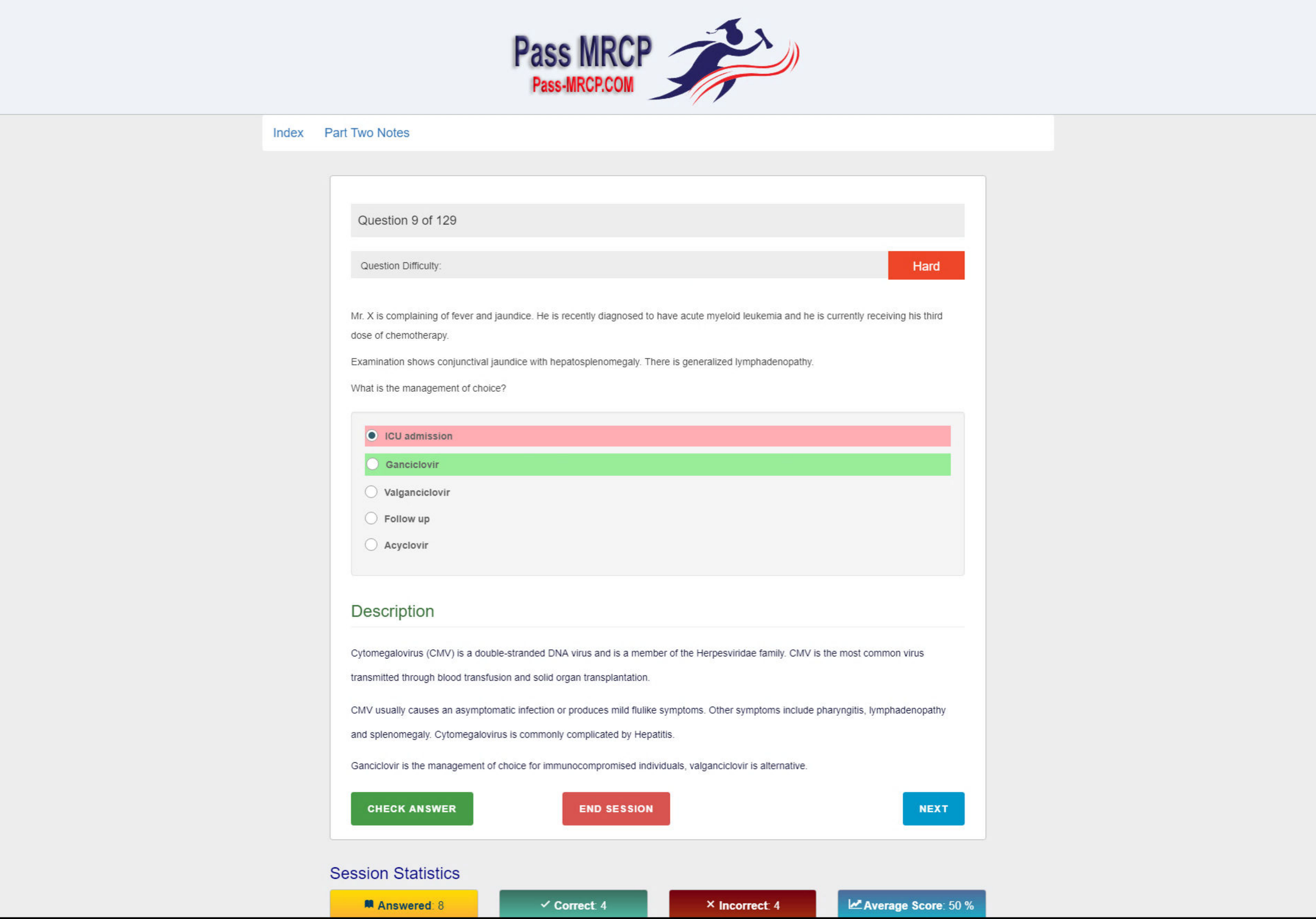
## Description

Primary maternal chickenpox infection in early to mid-pregnancy (before 20 weeks gestation) is estimated to have a 1-2% risk of causing the congenital varicella syndrome. It is characterized by:

- Limb hypoplasia and muscular atrophy
- Skin scarring
- Cortical atrophy and microcephaly
- Cataract formation

Session Statistics

**Answered**: 7
✓ **Correct**: 3
✕ **Incorrect**: 4
**Average Score**: 42.86



Question 9 of 129

Question Difficulty: Hard

Mr. X is complaining of fever and jaundice. He is recently diagnosed to have acute myeloid leukemia and he is currently receiving his third dose of chemotherapy.

Examination shows conjunctival jaundice with hepatosplenomegaly. There is generalized lymphadenopathy.

What is the management of choice?

- ● ICU admission
- ○ Ganciclovir
- ○ Valganciclovir
- ○ Follow up
- ○ Acyclovir

## Description

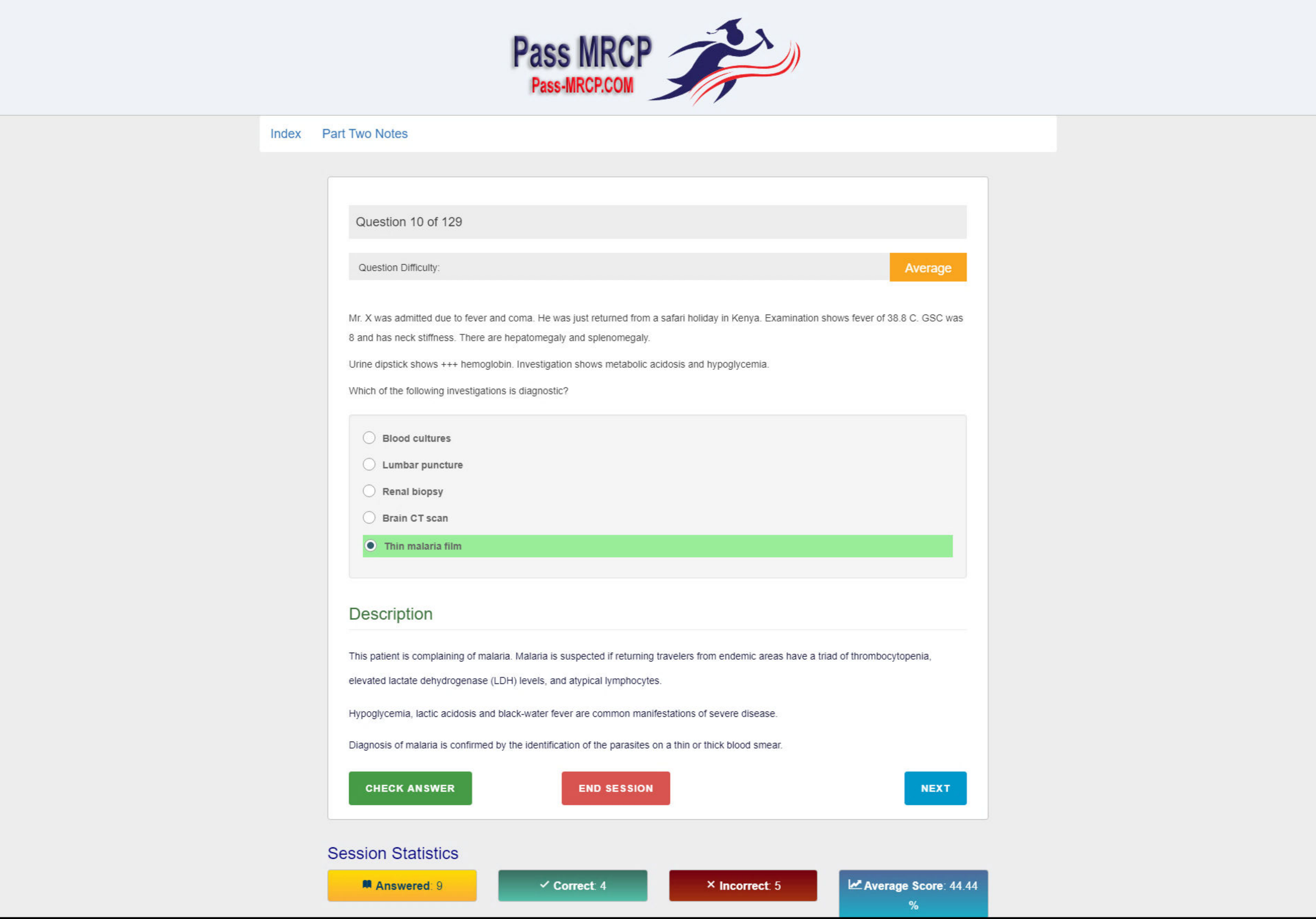
Cytomegalovirus (CMV) is a double-stranded DNA virus and is a member of the Herpesviridae family. CMV is the most common virus transmitted through blood transfusion and solid organ transplantation.

CMV usually causes an asymptomatic infection or produces mild flulike symptoms. Other symptoms include pharyngitis, lymphadenopathy and splenomegaly. Cytomegalovirus is commonly complicated by Hepatitis.

Ganciclovir is the management of choice for immunocompromised individuals, valganciclovir is alternative.

Session Statistics

Answered: 8
Correct: 4
Incorrect: 4
Average Score: 50 %



Question 10 of 129

Question Difficulty: Average

Mr. X was admitted due to fever and coma. He was just returned from a safari holiday in Kenya. Examination shows fever of 38.8 C. GSC was 8 and has neck stiffness. There are hepatomegaly and splenomegaly.

Urine dipstick shows +++ hemoglobin. Investigation shows metabolic acidosis and hypoglycemia.

Which of the following investigations is diagnostic?

- ○ **Blood cultures**
- ○ **Lumbar puncture**
- ○ **Renal biopsy**
- ○ **Brain CT scan**
- ● **Thin malaria film**

## Description

This patient is complaining of malaria. Malaria is suspected if returning travelers from endemic areas have a triad of thrombocytopenia, elevated lactate dehydrogenase (LDH) levels, and atypical lymphocytes.

Hypoglycemia, lactic acidosis and black-water fever are common manifestations of severe disease.

Diagnosis of malaria is confirmed by the identification of the parasites on a thin or thick blood smear.

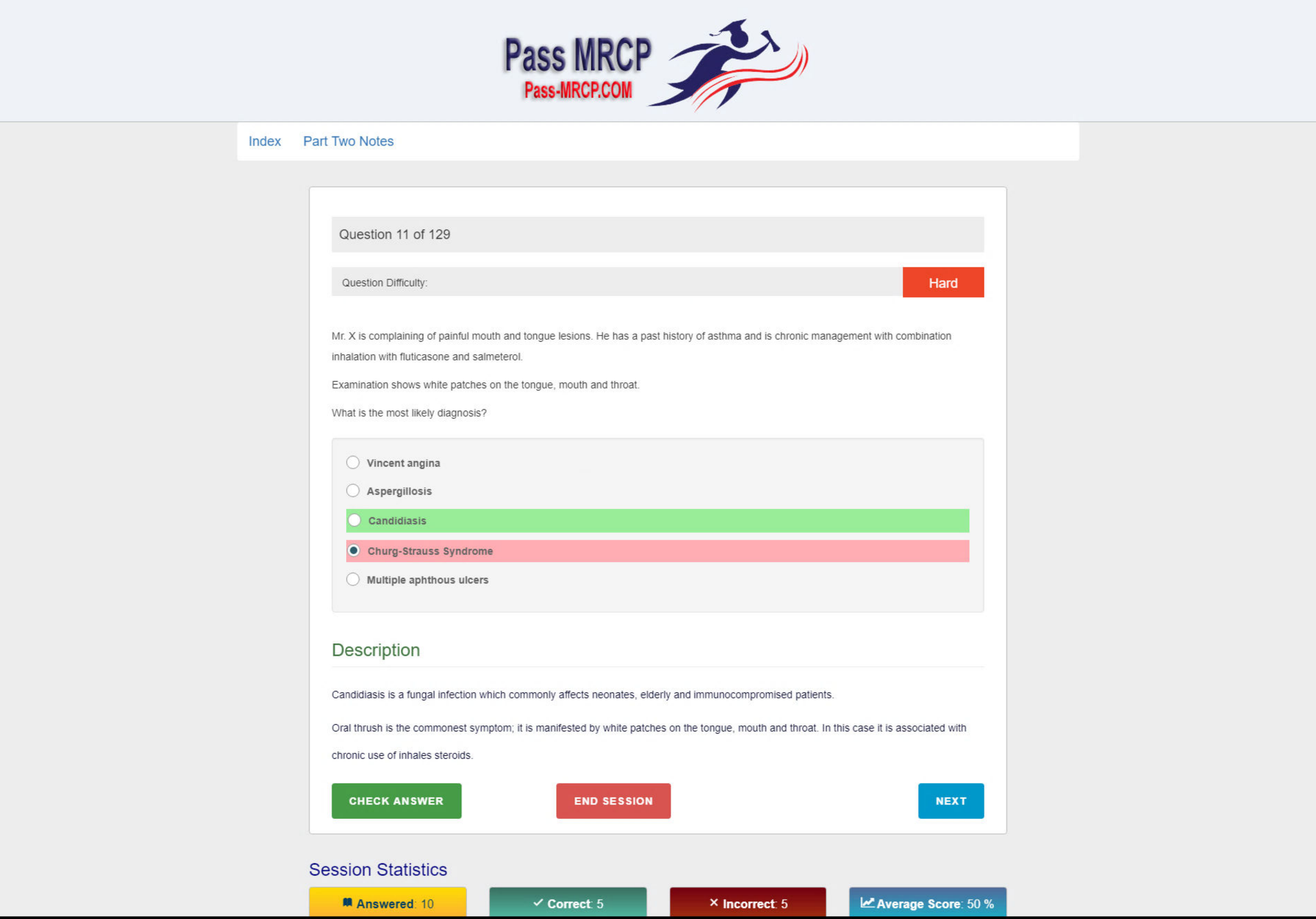
## Session Statistics

Answered: 9

✓ Correct: 4

✕ Incorrect: 5

Average Score: 44.44 %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Part Two Notes

Question 11 of 129

Question Difficulty: Hard

Mr. X is complaining of painful mouth and tongue lesions. He has a past history of asthma and is chronic management with combination inhalation with fluticasone and salmeterol.

Examination shows white patches on the tongue, mouth and throat.

What is the most likely diagnosis?

- ○ **Vincent angina**
- ○ **Aspergillosis**
- ○ **Candidiasis**
- ● **Churg-Strauss Syndrome**
- ○ **Multiple aphthous ulcers**

## Description

Candidiasis is a fungal infection which commonly affects neonates, elderly and immunocompromised patients.

Oral thrush is the commonest symptom; it is manifested by white patches on the tongue, mouth and throat. In this case it is associated with chronic use of inhales steroids.

CHECK ANSWER
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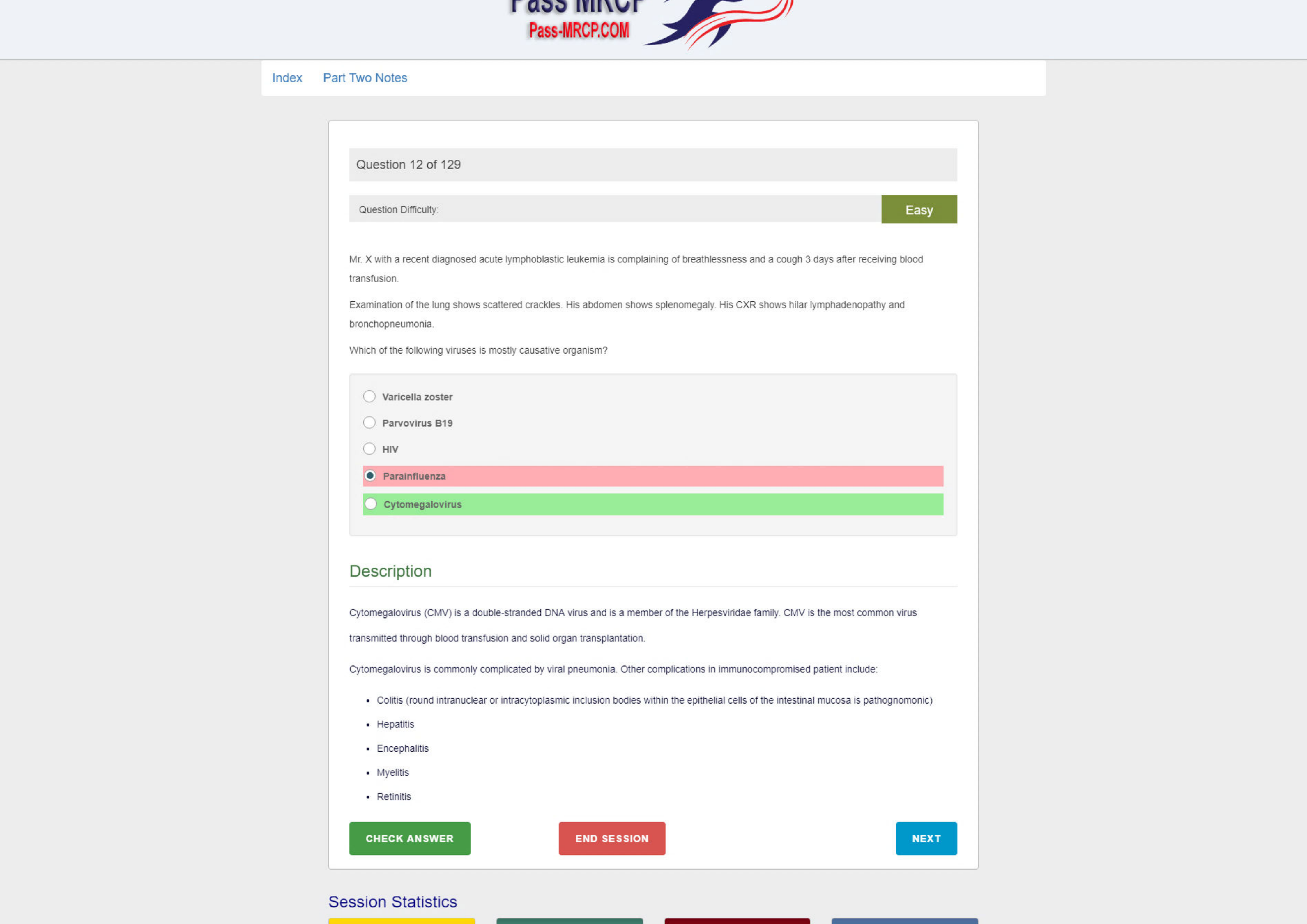
NEXT

## Session Statistics

Answered: 10
✓ Correct: 5
✕ Incorrect: 5
Average Score: 50 %



Question 12 of 129

Question Difficulty: **Easy**

Mr. X with a recent diagnosed acute lymphoblastic leukemia is complaining of breathlessness and a cough 3 days after receiving blood transfusion.

Examination of the lung shows scattered crackles. His abdomen shows splenomegaly. His CXR shows hilar lymphadenopathy and bronchopneumonia.

Which of the following viruses is mostly causative organism?

○ **Varicella zoster**
○ **Parvovirus B19**
○ **HIV**
● **Parainfluenza**
○ **Cytomegalovirus**

## Description

Cytomegalovirus (CMV) is a double-stranded DNA virus and is a member of the Herpesviridae family. CMV is the most common virus transmitted through blood transfusion and solid organ transplantation.

Cytomegalovirus is commonly complicated by viral pneumonia. Other complications in immunocompromised patient include:

- Colitis (round intranuclear or intracytoplasmic inclusion bodies within the epithelial cells of the intestinal mucosa is pathognomonic)
- Hepatitis
- Encephalitis
- Myelitis
- Retinitis

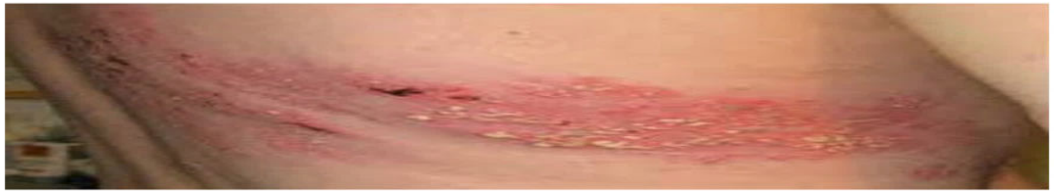
Session Statistics

Question 13 of 129

Question Difficulty: **Average**

Mr. X is complaining of painful skin lesion on his left shoulder and trunk. He reported burning sensation in the site of the lesion 4 days before it was developed.

Examination shows a patch of erythema covered by painful vesicles shown in the image. The vesicles are clear with some are ruptured forming crusts. There is tender left maxillary lymphadenopathy.



Investigations show positive Varicella IgG and negative Varicella IgM.

What is the most likely diagnosis?

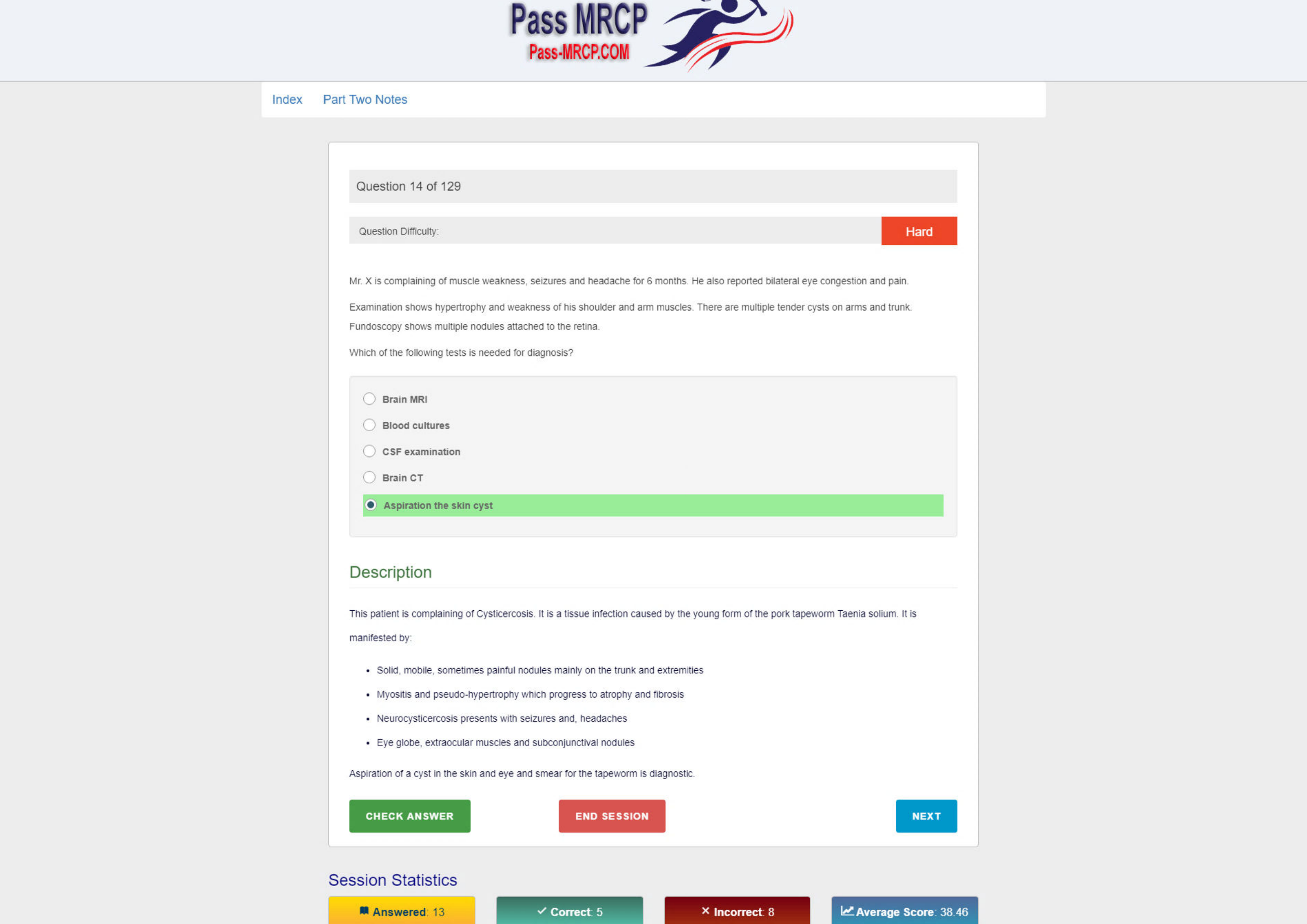
○ **Chickenpox**
○ **Molluscum contagiosum**
○ **Herpes zoster**
○ **Infectious mononucleosis**
● **Herpes simplex type 1**

## Description

Herpes zoster is a viral disease caused by reactivation of Varicella-zoster virus and is characterized by a painful skin rash and neurogenic pain (herpetic neuralgia) with blisters involving a limited area. It is manifested by"

- Sensory phenomena (pain or less commonly, itching or paresthesia) along 1 or more skin dermatomes and lasting 1-10 days
- Patchy erythema and grouped severely painful herpetiform vesicles developing on the erythematous base
- Vesicles are clear but eventually cloud, rupture, crust, and involute with scarring
- Regional lymphadenopathy

CHECK ANSWER    END SESSION    NEXT



Question 14 of 129

Question Difficulty: **Hard**

Mr. X is complaining of muscle weakness, seizures and headache for 6 months. He also reported bilateral eye congestion and pain.

Examination shows hypertrophy and weakness of his shoulder and arm muscles. There are multiple tender cysts on arms and trunk. Fundoscopy shows multiple nodules attached to the retina.

Which of the following tests is needed for diagnosis?

○ **Brain MRI**
○ **Blood cultures**
○ **CSF examination**
○ **Brain CT**
● **Aspiration the skin cyst**

## Description

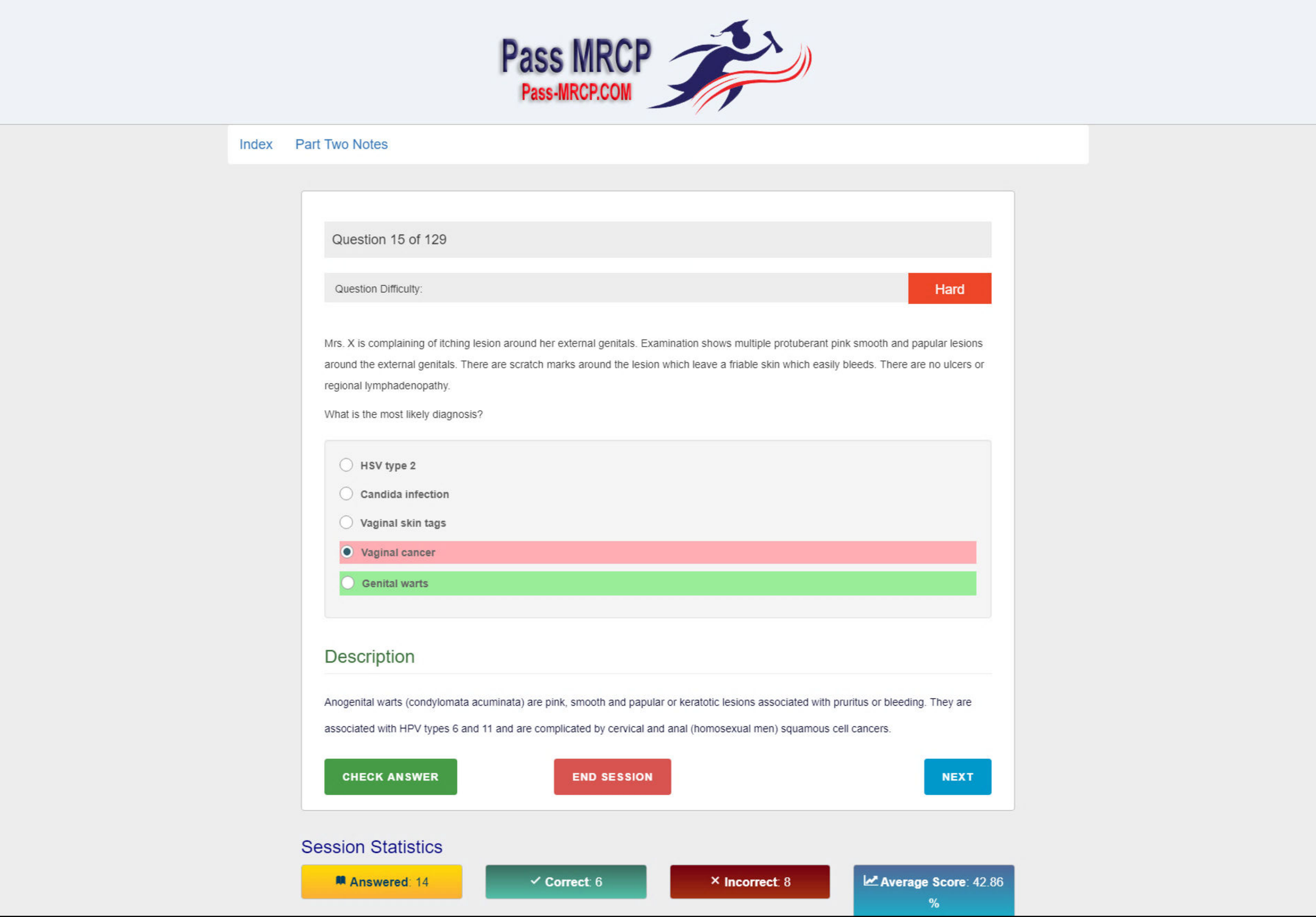
This patient is complaining of Cysticercosis. It is a tissue infection caused by the young form of the pork tapeworm Taenia solium. It is manifested by:

- Solid, mobile, sometimes painful nodules mainly on the trunk and extremities
- Myositis and pseudo-hypertrophy which progress to atrophy and fibrosis
- Neurocysticercosis presents with seizures and, headaches
- Eye globe, extraocular muscles and subconjunctival nodules

Aspiration of a cyst in the skin and eye and smear for the tapeworm is diagnostic.

Session Statistics

**Answered**: 13
**Correct**: 5
**Incorrect**: 8
**Average Score**: 38.46



Question 15 of 129

Question Difficulty: Hard

Mrs. X is complaining of itching lesion around her external genitals. Examination shows multiple protuberant pink smooth and papular lesions around the external genitals. There are scratch marks around the lesion which leave a friable skin which easily bleeds. There are no ulcers or regional lymphadenopathy.

What is the most likely diagnosis?

- ○ HSV type 2
- ○ Candida infection
- ○ Vaginal skin tags
- ● Vaginal cancer
- ○ Genital warts

## Description

Anogenital warts (condylomata acuminata) are pink, smooth and papular or keratotic lesions associated with pruritus or bleeding. They are associated with HPV types 6 and 11 and are complicated by cervical and anal (homosexual men) squamous cell cancers.

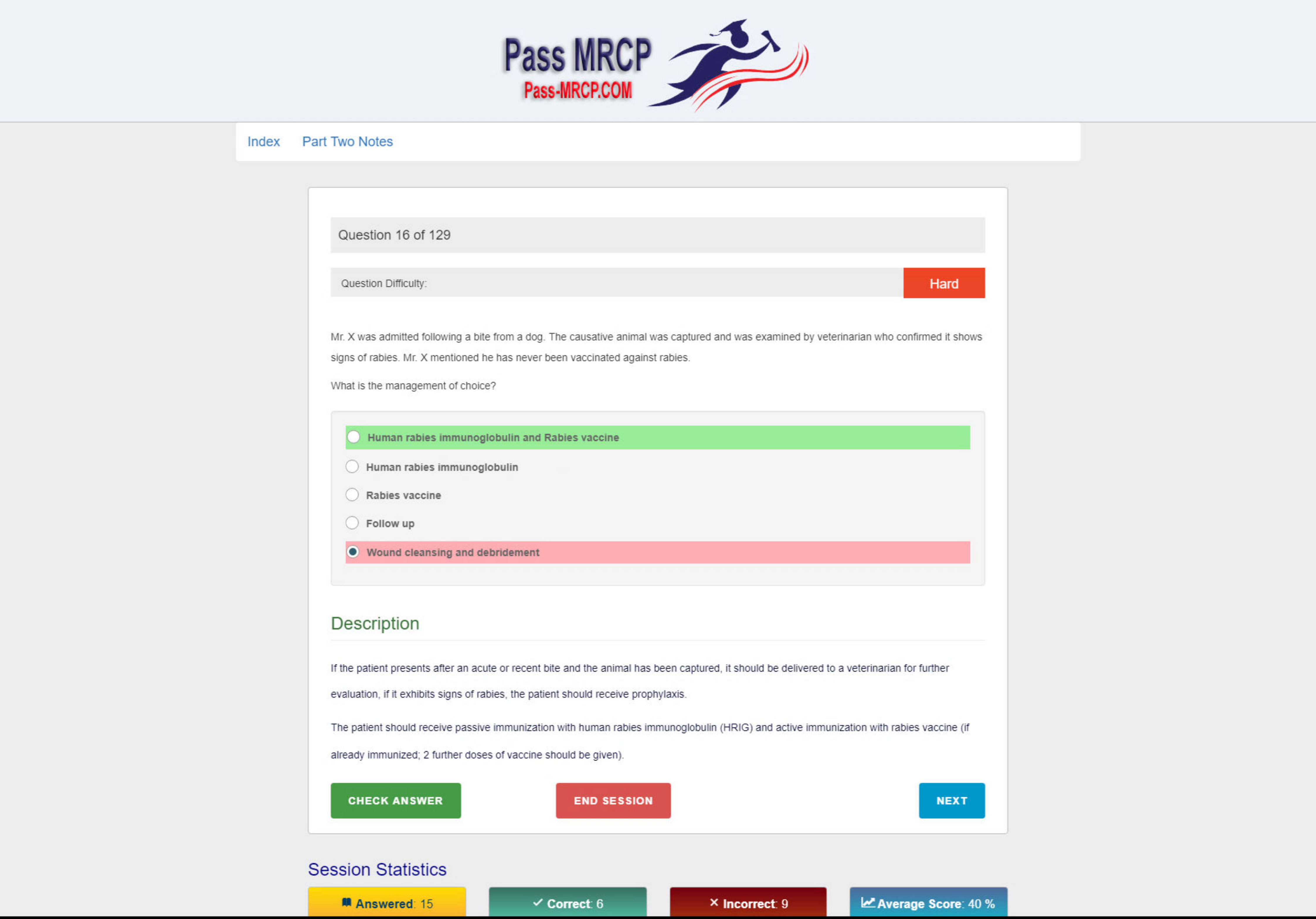
Session Statistics

Answered: 14

Correct: 6

Incorrect: 8

Average Score: 42.86 %



Question 16 of 129

Question Difficulty: **Hard**

Mr. X was admitted following a bite from a dog. The causative animal was captured and was examined by veterinarian who confirmed it shows signs of rabies. Mr. X mentioned he has never been vaccinated against rabies.

What is the management of choice?

- ○ **Human rabies immunoglobulin and Rabies vaccine**
- ○ **Human rabies immunoglobulin**
- ○ **Rabies vaccine**
- ○ **Follow up**
- ● **Wound cleansing and debridement**

## Description

If the patient presents after an acute or recent bite and the animal has been captured, it should be delivered to a veterinarian for further evaluation, if it exhibits signs of rabies, the patient should receive prophylaxis.

The patient should receive passive immunization with human rabies immunoglobulin (HRIG) and active immunization with rabies vaccine (if already immunized; 2 further doses of vaccine should be given).

## Session Statistics

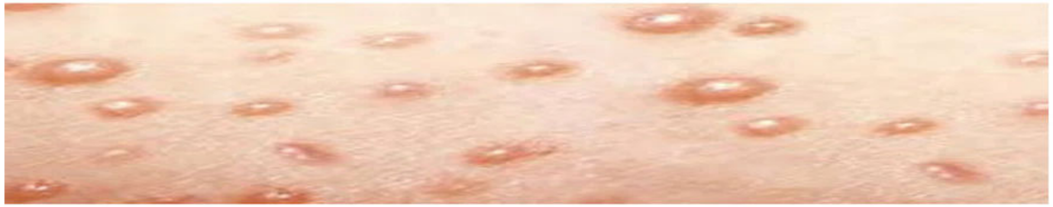
**Answered**: 15
✓ **Correct**: 6
✕ **Incorrect**: 9
**Average Score**: 40 %

Question 17 of 129

Question Difficulty: **Easy**

12 years old boy is complaining of diffuse rashes on his skin and painful mouth lesions. His mother mentioned he has fever and flu-like symptom 8 days before the rashes to develop.

Examination shows papules with clear superficial vesicles and pustules on his scalp and face. Some of them show central umbilication and crust formation. There are some painful vesicles on his mouth. There are some vesicles on the trunk shown in the image.



What is the most likely diagnosis?

- ○ **Infectious mononucleosis**
- ○ **Chickenpox**
- ○ **Molluscum contagiosum**
- ○ **Shingles**
- ● **Herpes simplex type 1**

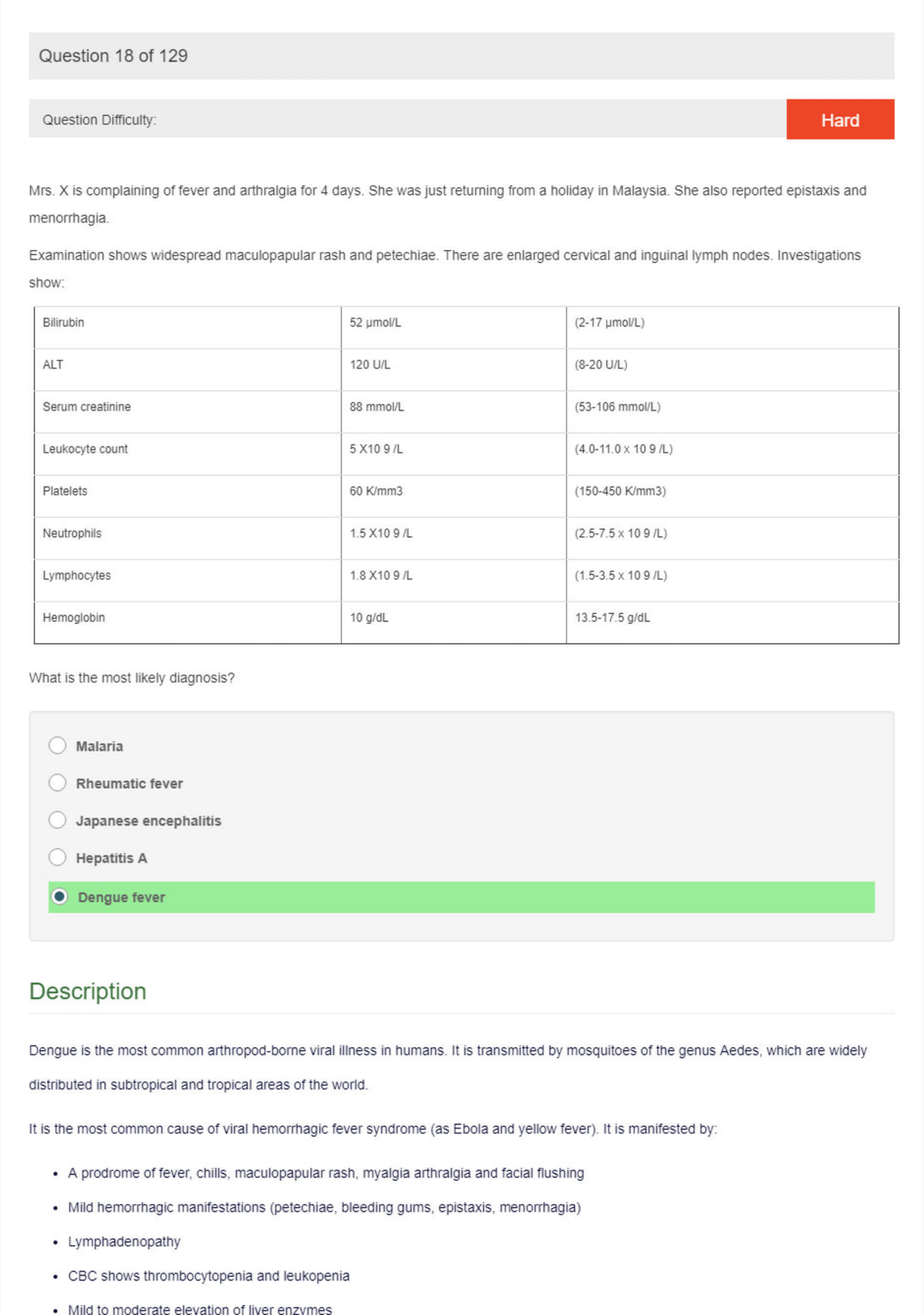
## Description

Chickenpox is usually acquired through inhalation of airborne respiratory droplets from an infected host. It is usually preceded by a prodrome of fever.

The characteristic rash are small, erythematous macules appear on the scalp, face, trunk, and proximal limbs, with rapid sequential progression over 12-14 hours to papules, clear vesicles, and pustules and subsequent central umbilication and crust formation.

Painful vesicles may appear on the palms and the soles and on the mucous membranes.

CHECK ANSWER END SESSION NEXT



Question 18 of 129

Question Difficulty: **Hard**

Mrs. X is complaining of fever and arthralgia for 4 days. She was just returning from a holiday in Malaysia. She also reported epistaxis and menorrhagia.

Examination shows widespread maculopapular rash and petechiae. There are enlarged cervical and inguinal lymph nodes. Investigations show:

| | | |
|---|---|---|
| Bilirubin | 52 µmol/L | (2-17 µmol/L) |
| ALT | 120 U/L | (8-20 U/L) |
| Serum creatinine | 88 mmol/L | (53-106 mmol/L) |
| Leukocyte count | 5 X10 9 /L | (4.0-11.0 x 10 9 /L) |
| Platelets | 60 K/mm3 | (150-450 K/mm3) |
| Neutrophils | 1.5 X10 9 /L | (2.5-7.5 x 10 9 /L) |
| Lymphocytes | 1.8 X10 9 /L | (1.5-3.5 x 10 9 /L) |
| Hemoglobin | 10 g/dL | 13.5-17.5 g/dL |

What is the most likely diagnosis?

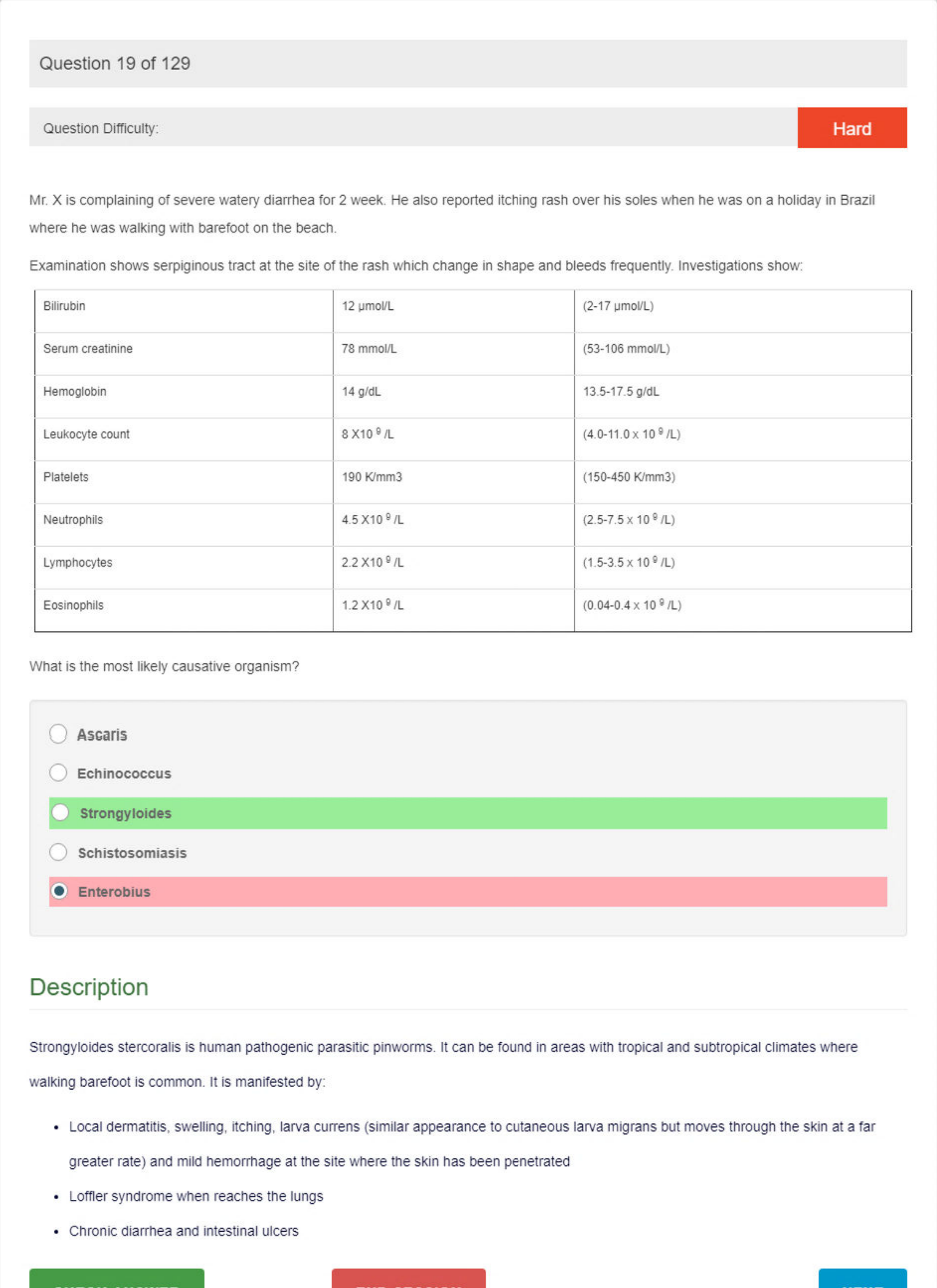
○ **Malaria**
○ **Rheumatic fever**
○ **Japanese encephalitis**
○ **Hepatitis A**
● **Dengue fever**

## Description

Dengue is the most common arthropod-borne viral illness in humans. It is transmitted by mosquitoes of the genus Aedes, which are widely distributed in subtropical and tropical areas of the world.

It is the most common cause of viral hemorrhagic fever syndrome (as Ebola and yellow fever). It is manifested by:

- A prodrome of fever, chills, maculopapular rash, myalgia arthralgia and facial flushing
- Mild hemorrhagic manifestations (petechiae, bleeding gums, epistaxis, menorrhagia)
- Lymphadenopathy
- CBC shows thrombocytopenia and leukopenia
- Mild to moderate elevation of liver enzymes



Question 19 of 129

Question Difficulty: **Hard**

Mr. X is complaining of severe watery diarrhea for 2 week. He also reported itching rash over his soles when he was on a holiday in Brazil where he was walking with barefoot on the beach.

Examination shows serpiginous tract at the site of the rash which change in shape and bleeds frequently. Investigations show:

| | | |
|---|---|---|
| Bilirubin | 12 µmol/L | (2-17 µmol/L) |
| Serum creatinine | 78 mmol/L | (53-106 mmol/L) |
| Hemoglobin | 14 g/dL | 13.5-17.5 g/dL |
| Leukocyte count | 8 X10 $^9$ /L | (4.0-11.0 x 10 $^9$ /L) |
| Platelets | 190 K/mm3 | (150-450 K/mm3) |
| Neutrophils | 4.5 X10 $^9$ /L | (2.5-7.5 x 10 $^9$ /L) |
| Lymphocytes | 2.2 X10 $^9$ /L | (1.5-3.5 x 10 $^9$ /L) |
| Eosinophils | 1.2 X10 $^9$ /L | (0.04-0.4 x 10 $^9$ /L) |

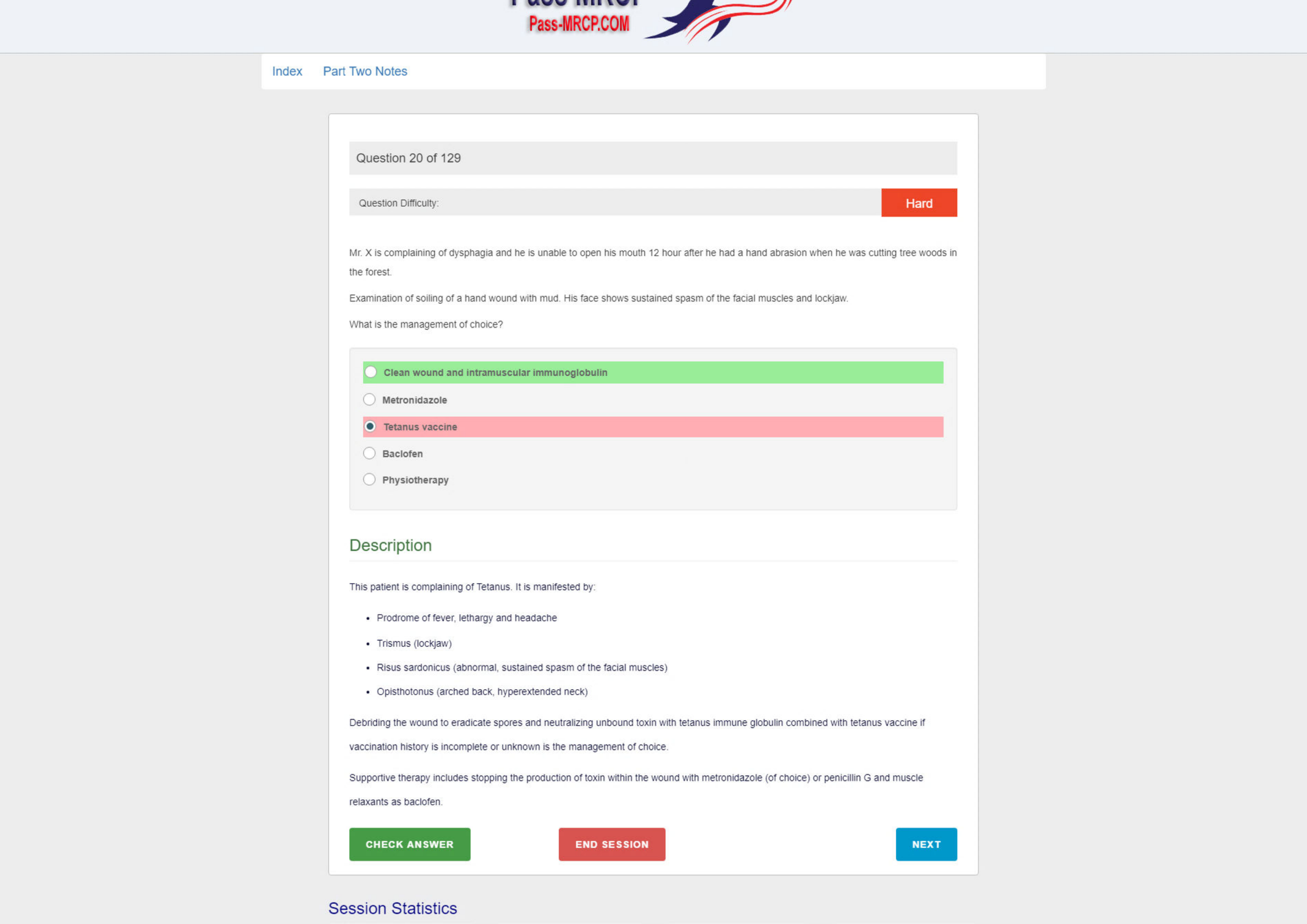
What is the most likely causative organism?

○ **Ascaris**
○ **Echinococcus**
○ **Strongyloides**
○ **Schistosomiasis**
● **Enterobius**

## Description

Strongyloides stercoralis is human pathogenic parasitic pinworms. It can be found in areas with tropical and subtropical climates where walking barefoot is common. It is manifested by:

- Local dermatitis, swelling, itching, larva currens (similar appearance to cutaneous larva migrans but moves through the skin at a far greater rate) and mild hemorrhage at the site where the skin has been penetrated
- Loffler syndrome when reaches the lungs
- Chronic diarrhea and intestinal ulcers



Question 20 of 129

Question Difficulty: Hard

Mr. X is complaining of dysphagia and he is unable to open his mouth 12 hour after he had a hand abrasion when he was cutting tree woods in the forest.

Examination of soiling of a hand wound with mud. His face shows sustained spasm of the facial muscles and lockjaw.

What is the management of choice?

○ **Clean wound and intramuscular immunoglobulin**

○ **Metronidazole**

● **Tetanus vaccine**

○ **Baclofen**

○ **Physiotherapy**

## Description

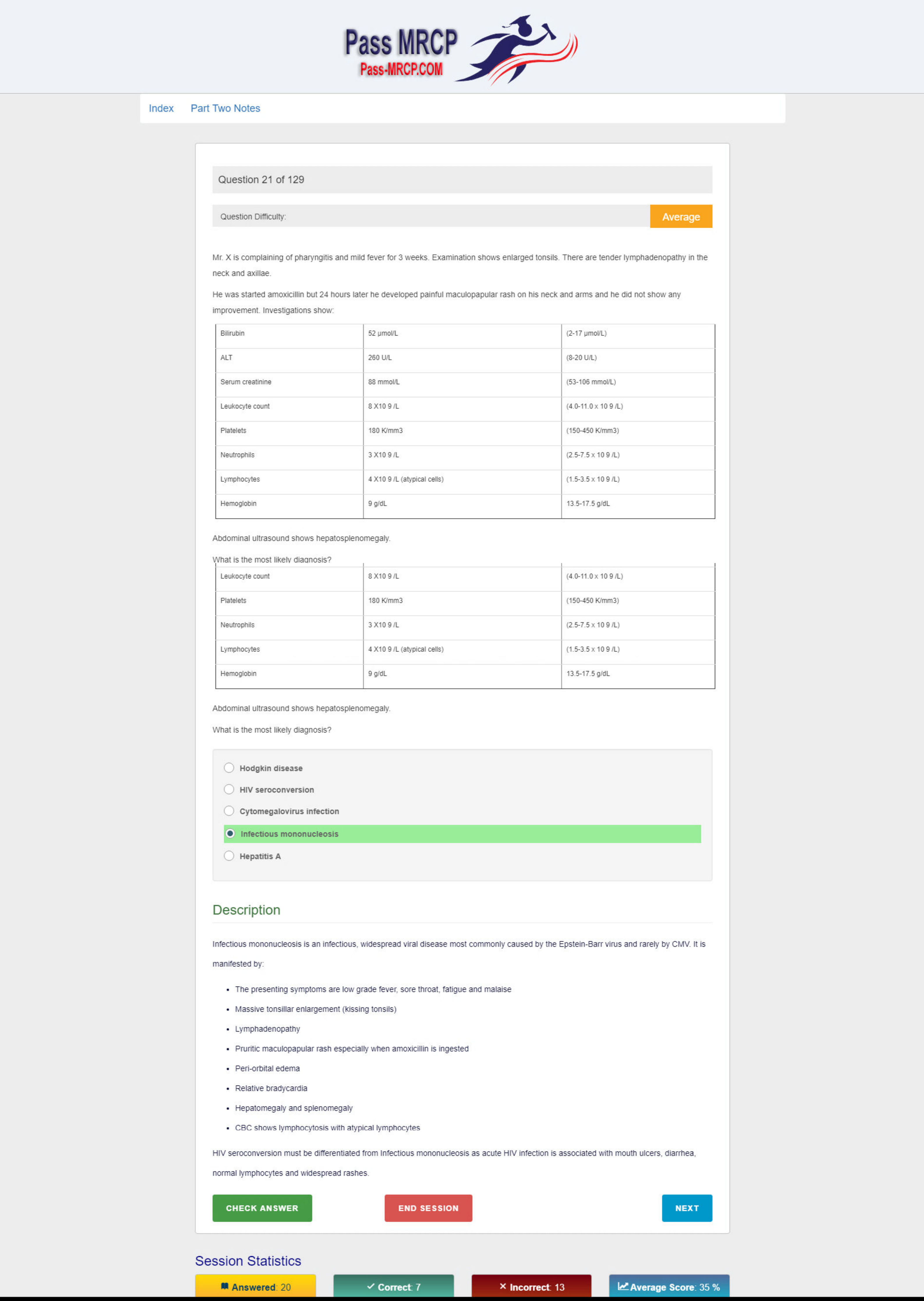
This patient is complaining of Tetanus. It is manifested by:

- Prodrome of fever, lethargy and headache
- Trismus (lockjaw)
- Risus sardonicus (abnormal, sustained spasm of the facial muscles)
- Opisthotonus (arched back, hyperextended neck)

Debriding the wound to eradicate spores and neutralizing unbound toxin with tetanus immune globulin combined with tetanus vaccine if vaccination history is incomplete or unknown is the management of choice.

Supportive therapy includes stopping the production of toxin within the wound with metronidazole (of choice) or penicillin G and muscle relaxants as baclofen.

Session Statistics



Question 21 of 129

Question Difficulty: Average

Mr. X is complaining of pharyngitis and mild fever for 3 weeks. Examination shows enlarged tonsils. There are tender lymphadenopathy in the neck and axillae.

He was started amoxicillin but 24 hours later he developed painful maculopapular rash on his neck and arms and he did not show any improvement. Investigations show:

| | | |
|---|---|---|
| Bilirubin | 52 µmol/L | (2-17 µmol/L) |
| ALT | 260 U/L | (8-20 U/L) |
| Serum creatinine | 88 mmol/L | (53-106 mmol/L) |
| Leukocyte count | 8 X10 9 /L | (4.0-11.0 x 10 9 /L) |
| Platelets | 180 K/mm3 | (150-450 K/mm3) |
| Neutrophils | 3 X10 9 /L | (2.5-7.5 x 10 9 /L) |
| Lymphocytes | 4 X10 9 /L (atypical cells) | (1.5-3.5 x 10 9 /L) |
| Hemoglobin | 9 g/dL | 13.5-17.5 g/dL |

Abdominal ultrasound shows hepatosplenomegaly.

What is the most likely diagnosis?

| | | |
|---|---|---|
| Leukocyte count | 8 X10 9 /L | (4.0-11.0 x 10 9 /L) |
| Platelets | 180 K/mm3 | (150-450 K/mm3) |
| Neutrophils | 3 X10 9 /L | (2.5-7.5 x 10 9 /L) |
| Lymphocytes | 4 X10 9 /L (atypical cells) | (1.5-3.5 x 10 9 /L) |
| Hemoglobin | 9 g/dL | 13.5-17.5 g/dL |

Abdominal ultrasound shows hepatosplenomegaly.

What is the most likely diagnosis?

○ **Hodgkin disease**
○ **HIV seroconversion**
○ **Cytomegalovirus infection**
● **Infectious mononucleosis**
○ **Hepatitis A**

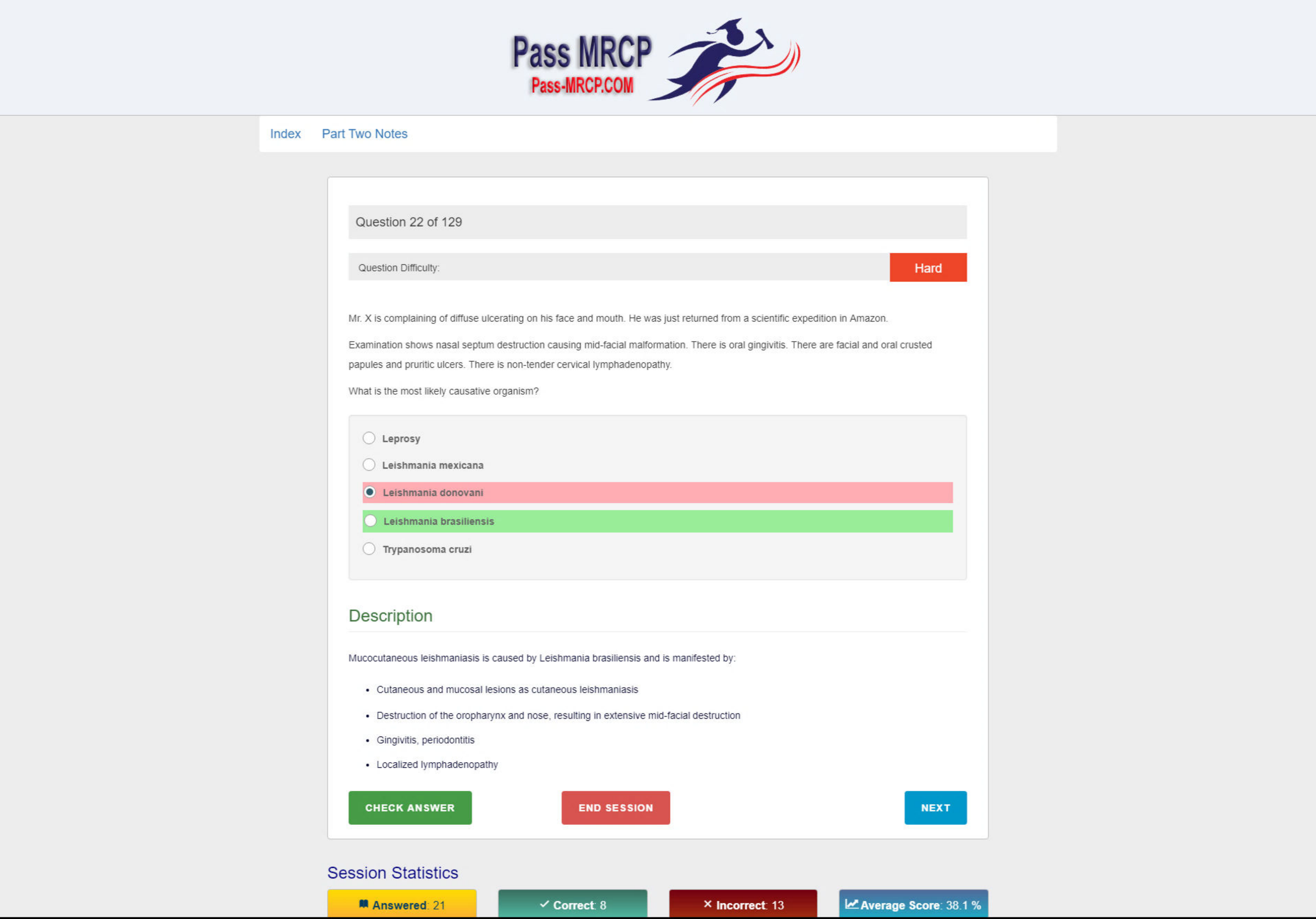
## Description

Infectious mononucleosis is an infectious, widespread viral disease most commonly caused by the Epstein-Barr virus and rarely by CMV. It is manifested by:

- The presenting symptoms are low grade fever, sore throat, fatigue and malaise
- Massive tonsillar enlargement (kissing tonsils)
- Lymphadenopathy
- Pruritic maculopapular rash especially when amoxicillin is ingested
- Peri-orbital edema
- Relative bradycardia
- Hepatomegaly and splenomegaly
- CBC shows lymphocytosis with atypical lymphocytes

HIV seroconversion must be differentiated from Infectious mononucleosis as acute HIV infection is associated with mouth ulcers, diarrhea, normal lymphocytes and widespread rashes.

Session Statistics



Question 22 of 129

Question Difficulty: **Hard**

Mr. X is complaining of diffuse ulcerating on his face and mouth. He was just returned from a scientific expedition in Amazon.

Examination shows nasal septum destruction causing mid-facial malformation. There is oral gingivitis. There are facial and oral crusted papules and pruritic ulcers. There is non-tender cervical lymphadenopathy.

What is the most likely causative organism?

○ **Leprosy**
○ **Leishmania mexicana**
● **Leishmania donovani**
○ **Leishmania brasiliensis**
○ **Trypanosoma cruzi**

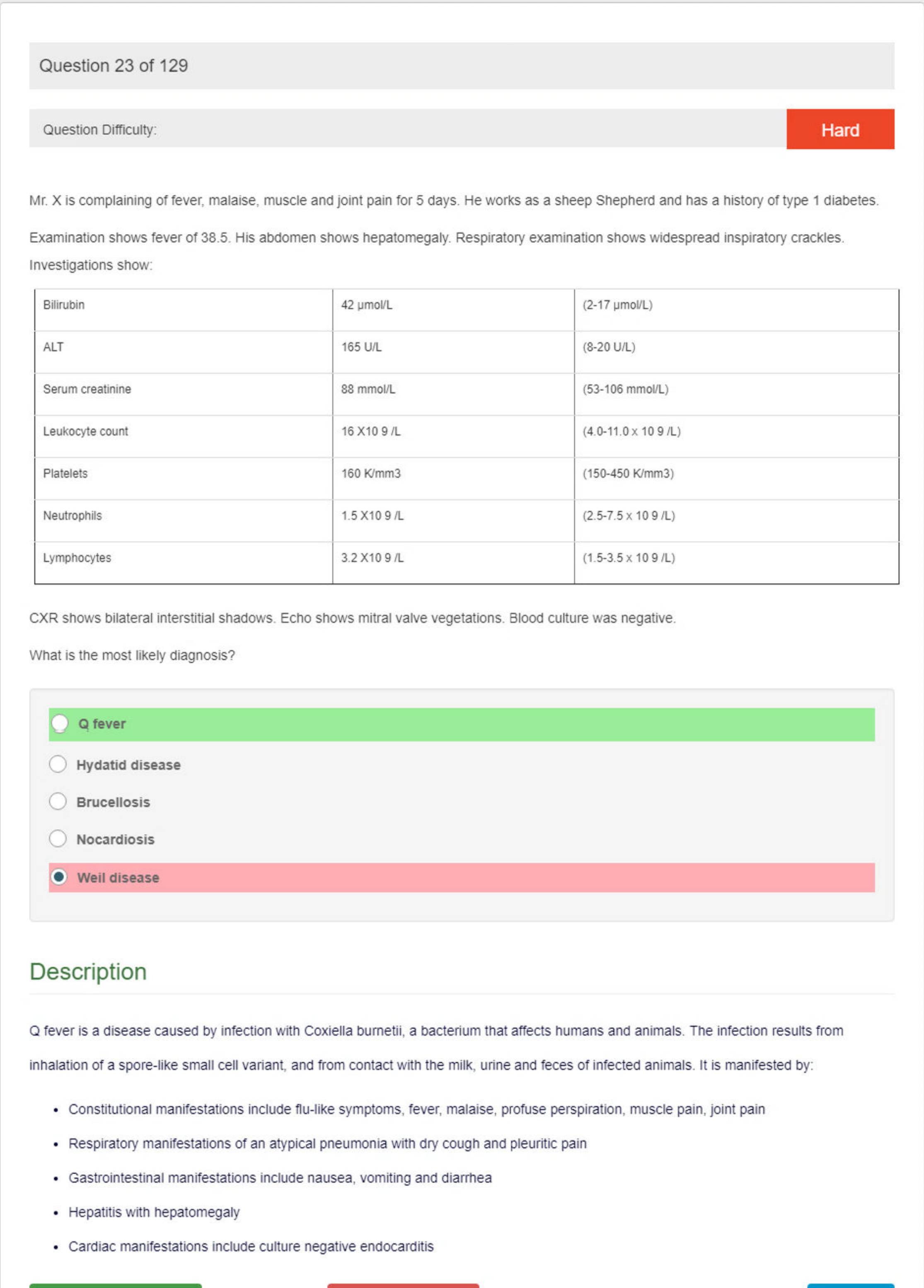
## Description

Mucocutaneous leishmaniasis is caused by Leishmania brasiliensis and is manifested by:

- Cutaneous and mucosal lesions as cutaneous leishmaniasis
- Destruction of the oropharynx and nose, resulting in extensive mid-facial destruction
- Gingivitis, periodontitis
- Localized lymphadenopathy

Session Statistics

**Answered**: 21
**Correct**: 8
**Incorrect**: 13
**Average Score**: 38.1 %



Question 23 of 129

Question Difficulty: **Hard**

Mr. X is complaining of fever, malaise, muscle and joint pain for 5 days. He works as a sheep Shepherd and has a history of type 1 diabetes.

Examination shows fever of 38.5. His abdomen shows hepatomegaly. Respiratory examination shows widespread inspiratory crackles.

Investigations show:

| | | |
|---|---|---|
| Bilirubin | 42 µmol/L | (2-17 µmol/L) |
| ALT | 165 U/L | (8-20 U/L) |
| Serum creatinine | 88 mmol/L | (53-106 mmol/L) |
| Leukocyte count | 16 X10 9 /L | (4.0-11.0 x 10 9 /L) |
| Platelets | 160 K/mm3 | (150-450 K/mm3) |
| Neutrophils | 1.5 X10 9 /L | (2.5-7.5 x 10 9 /L) |
| Lymphocytes | 3.2 X10 9 /L | (1.5-3.5 x 10 9 /L) |

CXR shows bilateral interstitial shadows. Echo shows mitral valve vegetations. Blood culture was negative.

What is the most likely diagnosis?

○ **Q fever**

○ **Hydatid disease**

○ **Brucellosis**

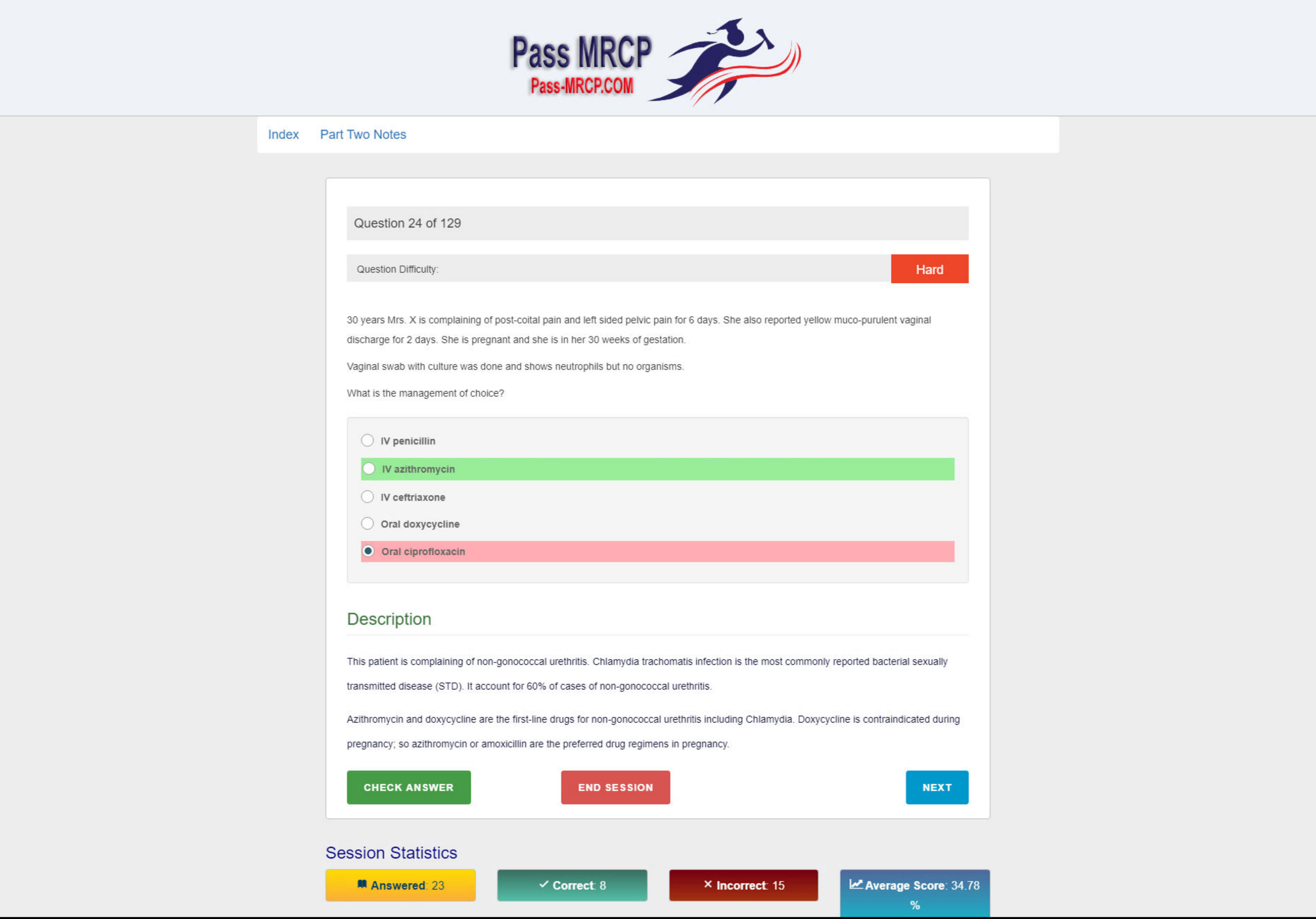
○ **Nocardiosis**

● **Weil disease**

## Description

Q fever is a disease caused by infection with Coxiella burnetii, a bacterium that affects humans and animals. The infection results from inhalation of a spore-like small cell variant, and from contact with the milk, urine and feces of infected animals. It is manifested by:

- Constitutional manifestations include flu-like symptoms, fever, malaise, profuse perspiration, muscle pain, joint pain
- Respiratory manifestations of an atypical pneumonia with dry cough and pleuritic pain
- Gastrointestinal manifestations include nausea, vomiting and diarrhea
- Hepatitis with hepatomegaly
- Cardiac manifestations include culture negative endocarditis



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Question 24 of 129

Question Difficulty: **Hard**

30 years Mrs. X is complaining of post-coital pain and left sided pelvic pain for 6 days. She also reported yellow muco-purulent vaginal discharge for 2 days. She is pregnant and she is in her 30 weeks of gestation.

Vaginal swab with culture was done and shows neutrophils but no organisms.

What is the management of choice?

- ○ **IV penicillin**
- ○ **IV azithromycin**
- ○ **IV ceftriaxone**
- ○ **Oral doxycycline**
- ● **Oral ciprofloxacin**

## Description

This patient is complaining of non-gonococcal urethritis. Chlamydia trachomatis infection is the most commonly reported bacterial sexually transmitted disease (STD). It account for 60% of cases of non-gonococcal urethritis.

Azithromycin and doxycycline are the first-line drugs for non-gonococcal urethritis including Chlamydia. Doxycycline is contraindicated during pregnancy; so azithromycin or amoxicillin are the preferred drug regimens in pregnancy.

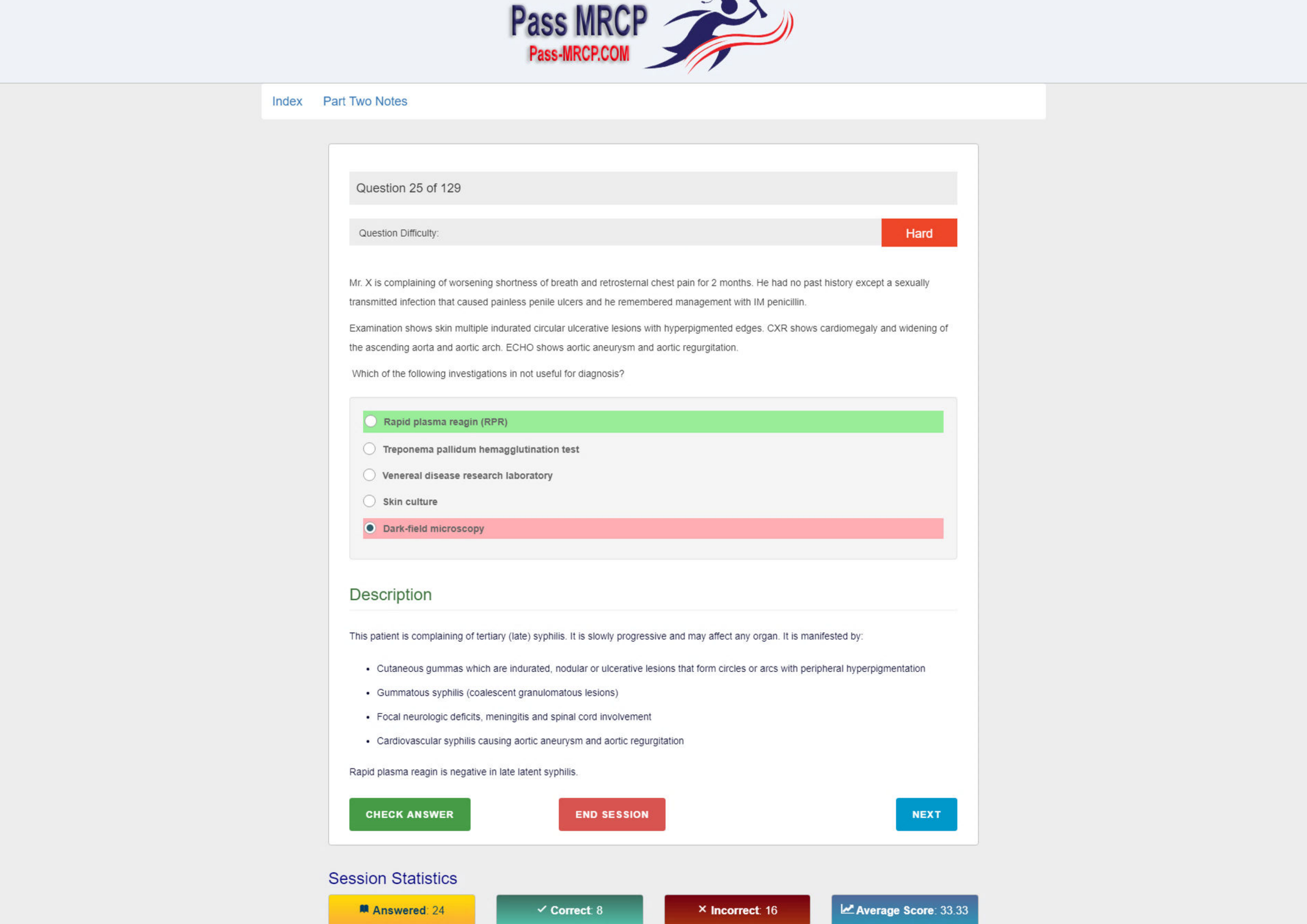
Session Statistics

**Answered**: 23

✓ **Correct**: 8

✕ **Incorrect**: 15

**Average Score**: 34.78 %



Question 25 of 129

Question Difficulty: Hard

Mr. X is complaining of worsening shortness of breath and retrosternal chest pain for 2 months. He had no past history except a sexually transmitted infection that caused painless penile ulcers and he remembered management with IM penicillin.

Examination shows skin multiple indurated circular ulcerative lesions with hyperpigmented edges. CXR shows cardiomegaly and widening of the ascending aorta and aortic arch. ECHO shows aortic aneurysm and aortic regurgitation.

Which of the following investigations in not useful for diagnosis?

○ **Rapid plasma reagin (RPR)**

○ **Treponema pallidum hemagglutination test**

○ **Venereal disease research laboratory**

○ **Skin culture**

● **Dark-field microscopy**

## Description

This patient is complaining of tertiary (late) syphilis. It is slowly progressive and may affect any organ. It is manifested by:

- Cutaneous gummas which are indurated, nodular or ulcerative lesions that form circles or arcs with peripheral hyperpigmentation
- Gummatous syphilis (coalescent granulomatous lesions)
- Focal neurologic deficits, meningitis and spinal cord involvement
- Cardiovascular syphilis causing aortic aneurysm and aortic regurgitation

Rapid plasma reagin is negative in late latent syphilis.

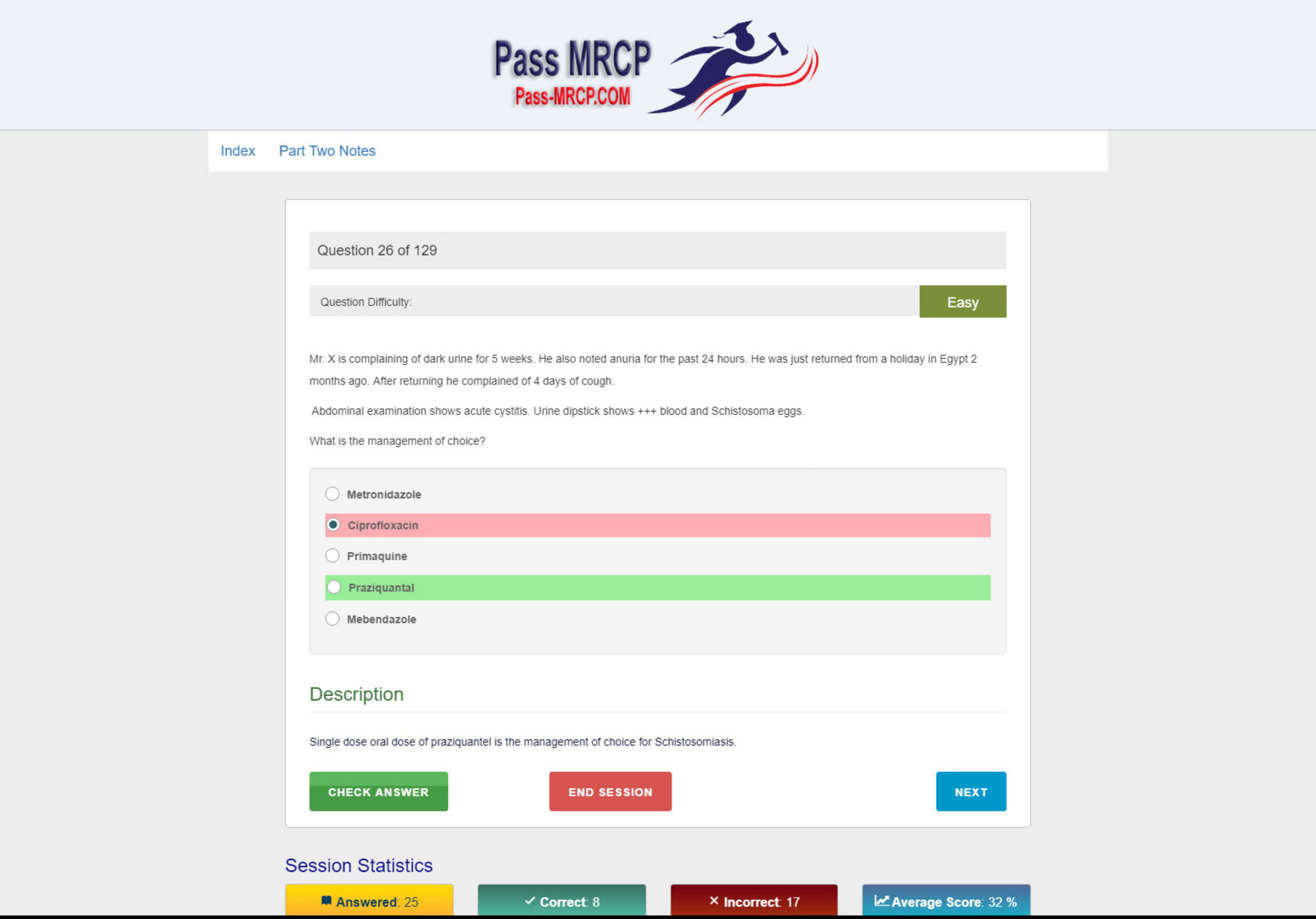
Session Statistics

Answered: 24

Correct: 8

Incorrect: 16

Average Score: 33.33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Question 26 of 129

Question Difficulty: Easy

Mr. X is complaining of dark urine for 5 weeks. He also noted anuria for the past 24 hours. He was just returned from a holiday in Egypt 2 months ago. After returning he complained of 4 days of cough.

Abdominal examination shows acute cystitis. Urine dipstick shows +++ blood and Schistosoma eggs.

What is the management of choice?

- ○ Metronidazole
- ● Ciprofloxacin
- ○ Primaquine
- ○ Praziquantal
- ○ Mebendazole

## Description

Single dose oral dose of praziquantel is the management of choice for Schistosomiasis.

CHECK ANSWER
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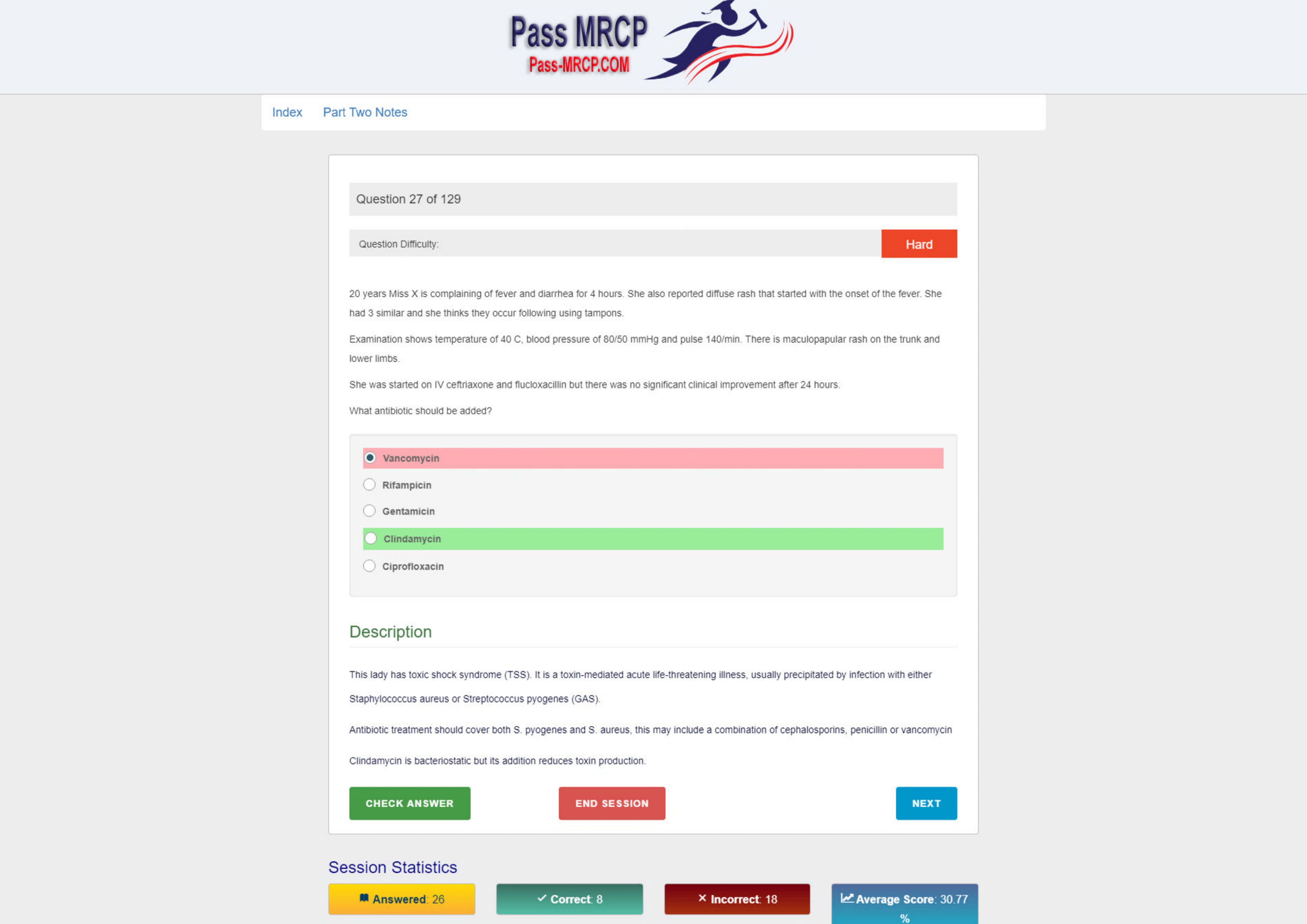
Session Statistics

Answered: 25
✓ Correct: 8
✕ Incorrect: 17
Average Score: 32 %



Question 27 of 129

Question Difficulty: **Hard**

20 years Miss X is complaining of fever and diarrhea for 4 hours. She also reported diffuse rash that started with the onset of the fever. She had 3 similar and she thinks they occur following using tampons.

Examination shows temperature of 40 C, blood pressure of 80/50 mmHg and pulse 140/min. There is maculopapular rash on the trunk and lower limbs.

She was started on IV ceftriaxone and flucloxacillin but there was no significant clinical improvement after 24 hours.

What antibiotic should be added?

- ● **Vancomycin**
- ○ **Rifampicin**
- ○ **Gentamicin**
- ○ **Clindamycin**
- ○ **Ciprofloxacin**

## Description

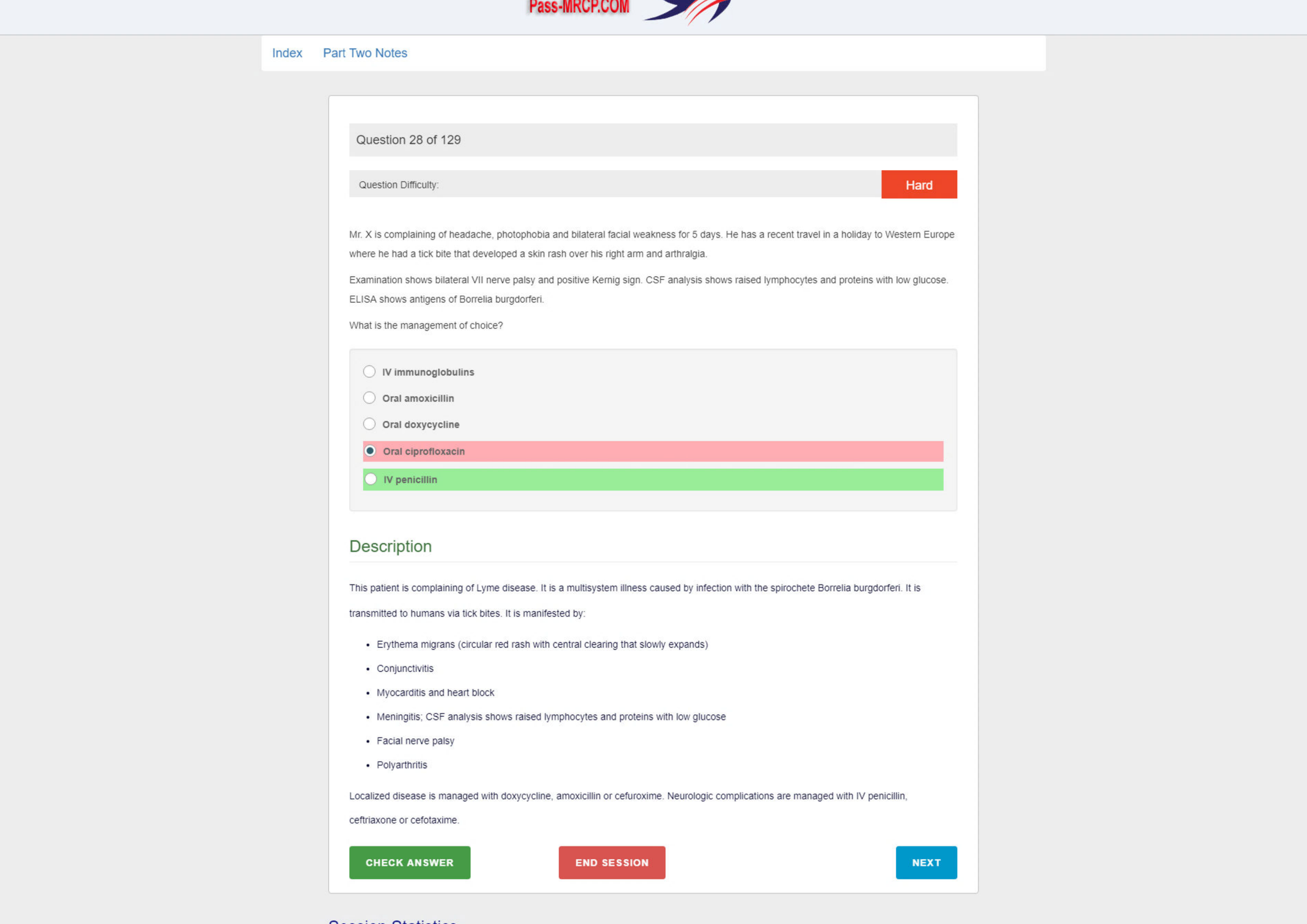
This lady has toxic shock syndrome (TSS). It is a toxin-mediated acute life-threatening illness, usually precipitated by infection with either Staphylococcus aureus or Streptococcus pyogenes (GAS).

Antibiotic treatment should cover both S. pyogenes and S. aureus, this may include a combination of cephalosporins, penicillin or vancomycin

Clindamycin is bacteriostatic but its addition reduces toxin production.

Session Statistics

**Answered**: 26
**Correct**: 8
**Incorrect**: 18
**Average Score**: 30.77 %



Question 28 of 129

Question Difficulty: **Hard**

Mr. X is complaining of headache, photophobia and bilateral facial weakness for 5 days. He has a recent travel in a holiday to Western Europe where he had a tick bite that developed a skin rash over his right arm and arthralgia.

Examination shows bilateral VII nerve palsy and positive Kernig sign. CSF analysis shows raised lymphocytes and proteins with low glucose. ELISA shows antigens of Borrelia burgdorferi.

What is the management of choice?

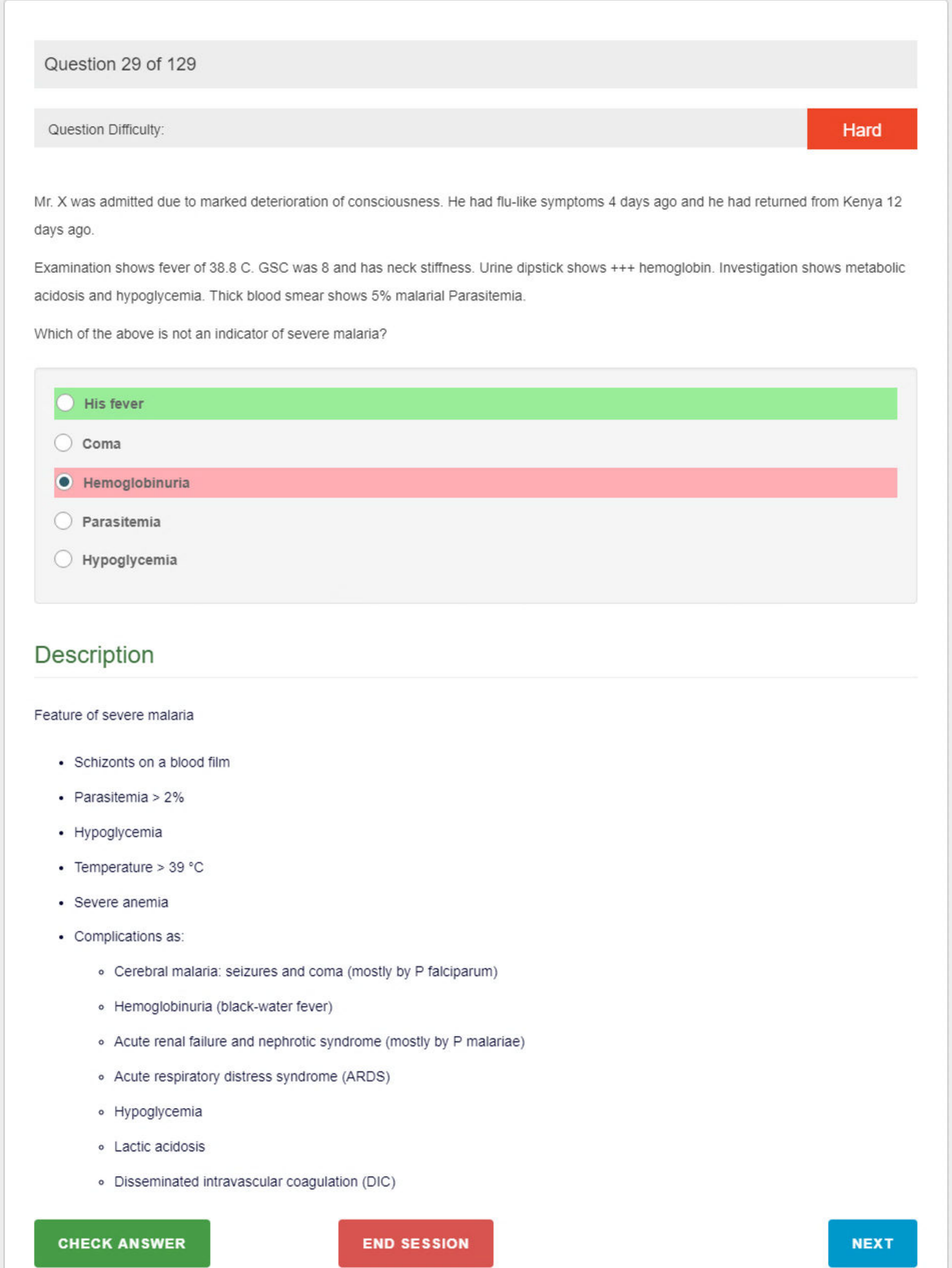
○ **IV immunoglobulins**
○ **Oral amoxicillin**
○ **Oral doxycycline**
● **Oral ciprofloxacin**
○ **IV penicillin**

## Description

This patient is complaining of Lyme disease. It is a multisystem illness caused by infection with the spirochete Borrelia burgdorferi. It is transmitted to humans via tick bites. It is manifested by:

- Erythema migrans (circular red rash with central clearing that slowly expands)
- Conjunctivitis
- Myocarditis and heart block
- Meningitis; CSF analysis shows raised lymphocytes and proteins with low glucose
- Facial nerve palsy
- Polyarthritis

Localized disease is managed with doxycycline, amoxicillin or cefuroxime. Neurologic complications are managed with IV penicillin, ceftriaxone or cefotaxime.



Question 29 of 129

Question Difficulty: **Hard**

Mr. X was admitted due to marked deterioration of consciousness. He had flu-like symptoms 4 days ago and he had returned from Kenya 12 days ago.

Examination shows fever of 38.8 C. GSC was 8 and has neck stiffness. Urine dipstick shows +++ hemoglobin. Investigation shows metabolic acidosis and hypoglycemia. Thick blood smear shows 5% malarial Parasitemia.

Which of the above is not an indicator of severe malaria?

○ **His fever** 🟩

○ **Coma**

● **Hemoglobinuria** 🟥

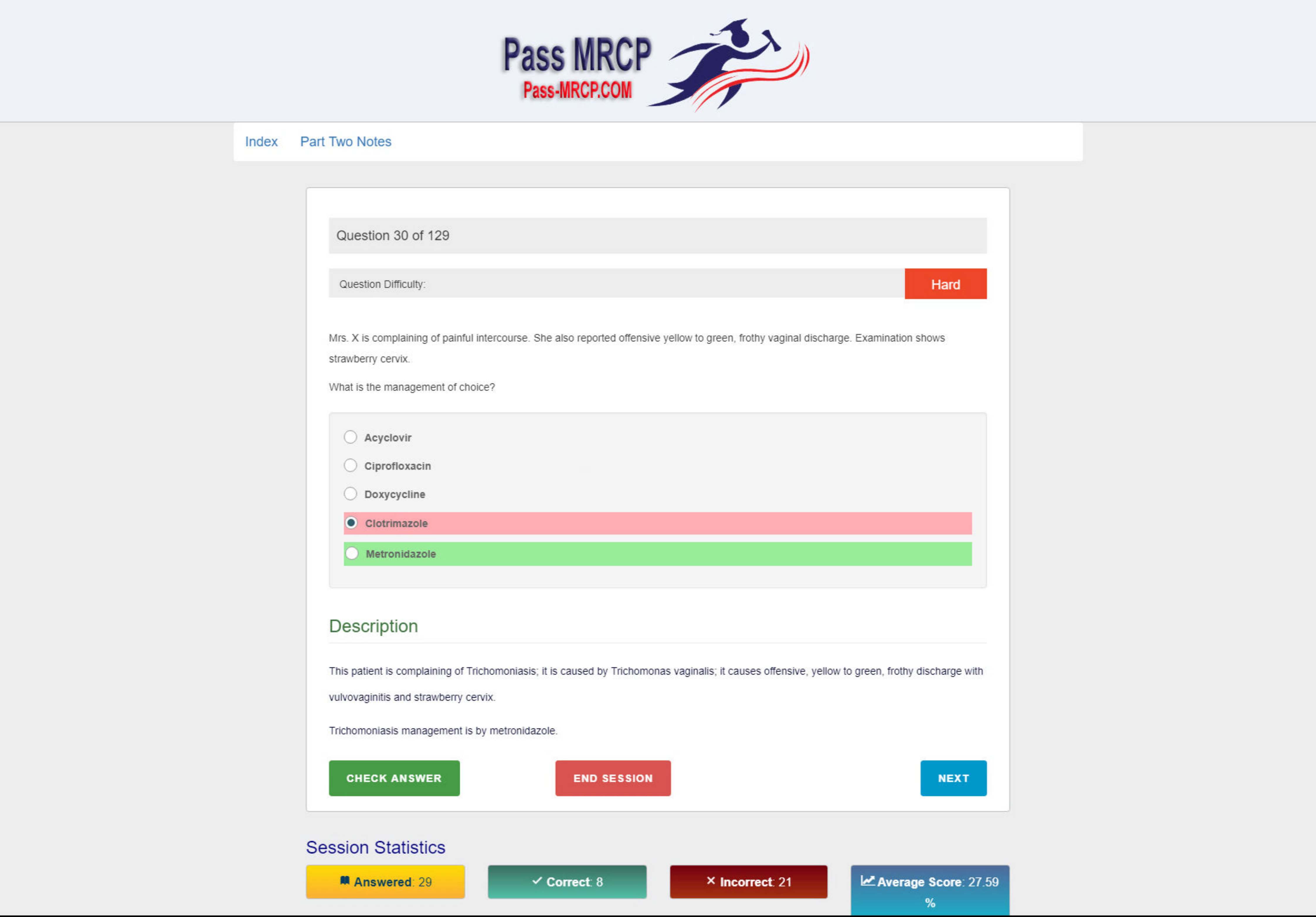
○ **Parasitemia**

○ **Hypoglycemia**

## Description

Feature of severe malaria

- Schizonts on a blood film
- Parasitemia > 2%
- Hypoglycemia
- Temperature > 39 °C
- Severe anemia
- Complications as:
    - Cerebral malaria: seizures and coma (mostly by P falciparum)
    - Hemoglobinuria (black-water fever)
    - Acute renal failure and nephrotic syndrome (mostly by P malariae)
    - Acute respiratory distress syndrome (ARDS)
    - Hypoglycemia
    - Lactic acidosis
    - Disseminated intravascular coagulation (DIC)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Question 30 of 129

Question Difficulty: Hard

Mrs. X is complaining of painful intercourse. She also reported offensive yellow to green, frothy vaginal discharge. Examination shows strawberry cervix.

What is the management of choice?

○ Acyclovir
○ Ciprofloxacin
○ Doxycycline
● Clotrimazole
○ Metronidazole

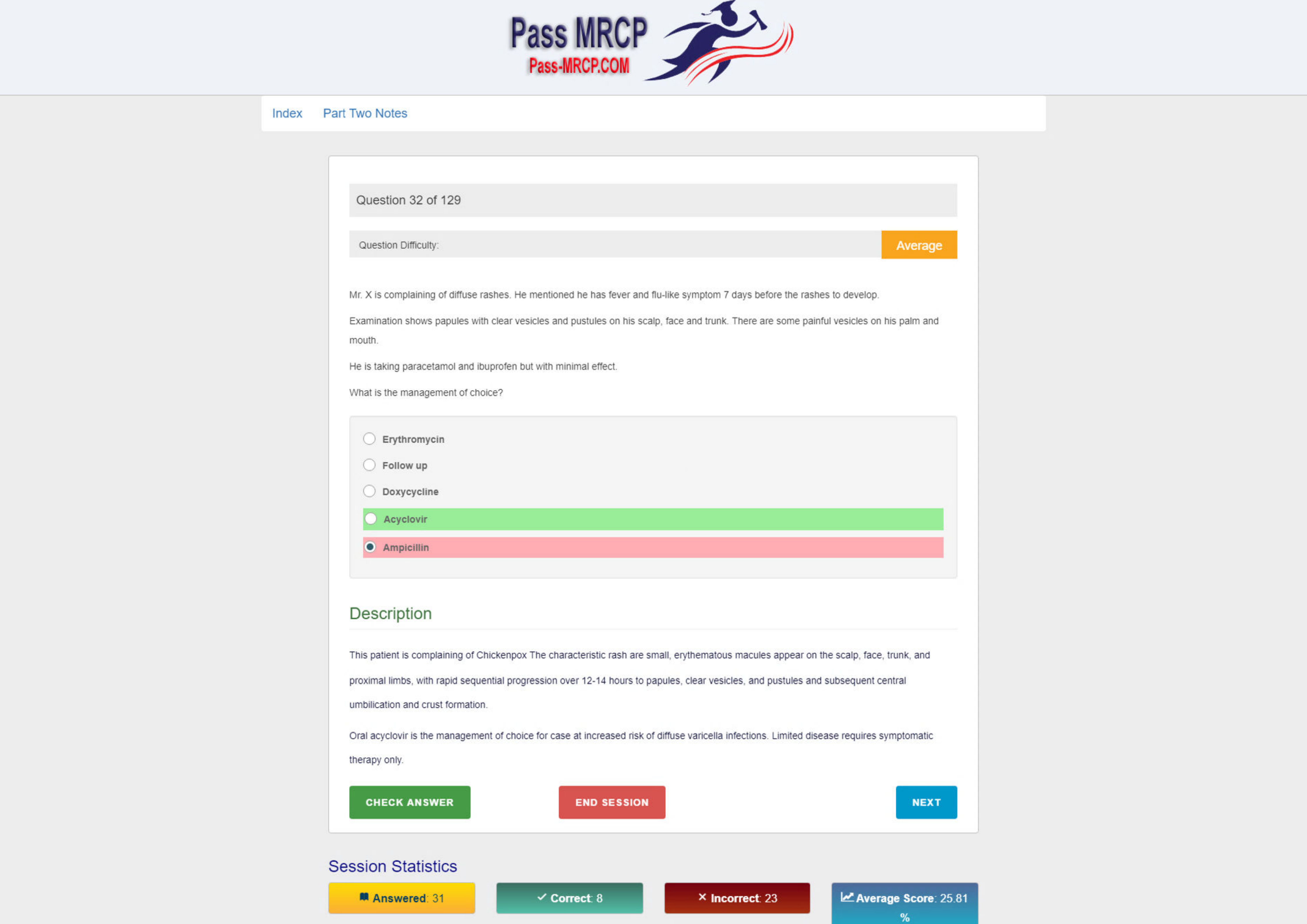
## Description

This patient is complaining of Trichomoniasis; it is caused by Trichomonas vaginalis; it causes offensive, yellow to green, frothy discharge with vulvovaginitis and strawberry cervix.

Trichomoniasis management is by metronidazole.

Session Statistics

Answered: 29
✓ Correct: 8
✕ Incorrect: 21
Average Score: 27.59 %



Question 32 of 129

Question Difficulty: Average

Mr. X is complaining of diffuse rashes. He mentioned he has fever and flu-like symptom 7 days before the rashes to develop.

Examination shows papules with clear vesicles and pustules on his scalp, face and trunk. There are some painful vesicles on his palm and mouth.

He is taking paracetamol and ibuprofen but with minimal effect.

What is the management of choice?

- ○ Erythromycin
- ○ Follow up
- ○ Doxycycline
- ○ Acyclovir
- ● Ampicillin

## Description

This patient is complaining of Chickenpox The characteristic rash are small, erythematous macules appear on the scalp, face, trunk, and proximal limbs, with rapid sequential progression over 12-14 hours to papules, clear vesicles, and pustules and subsequent central umbilication and crust formation.

Oral acyclovir is the management of choice for case at increased risk of diffuse varicella infections. Limited disease requires symptomatic therapy only.

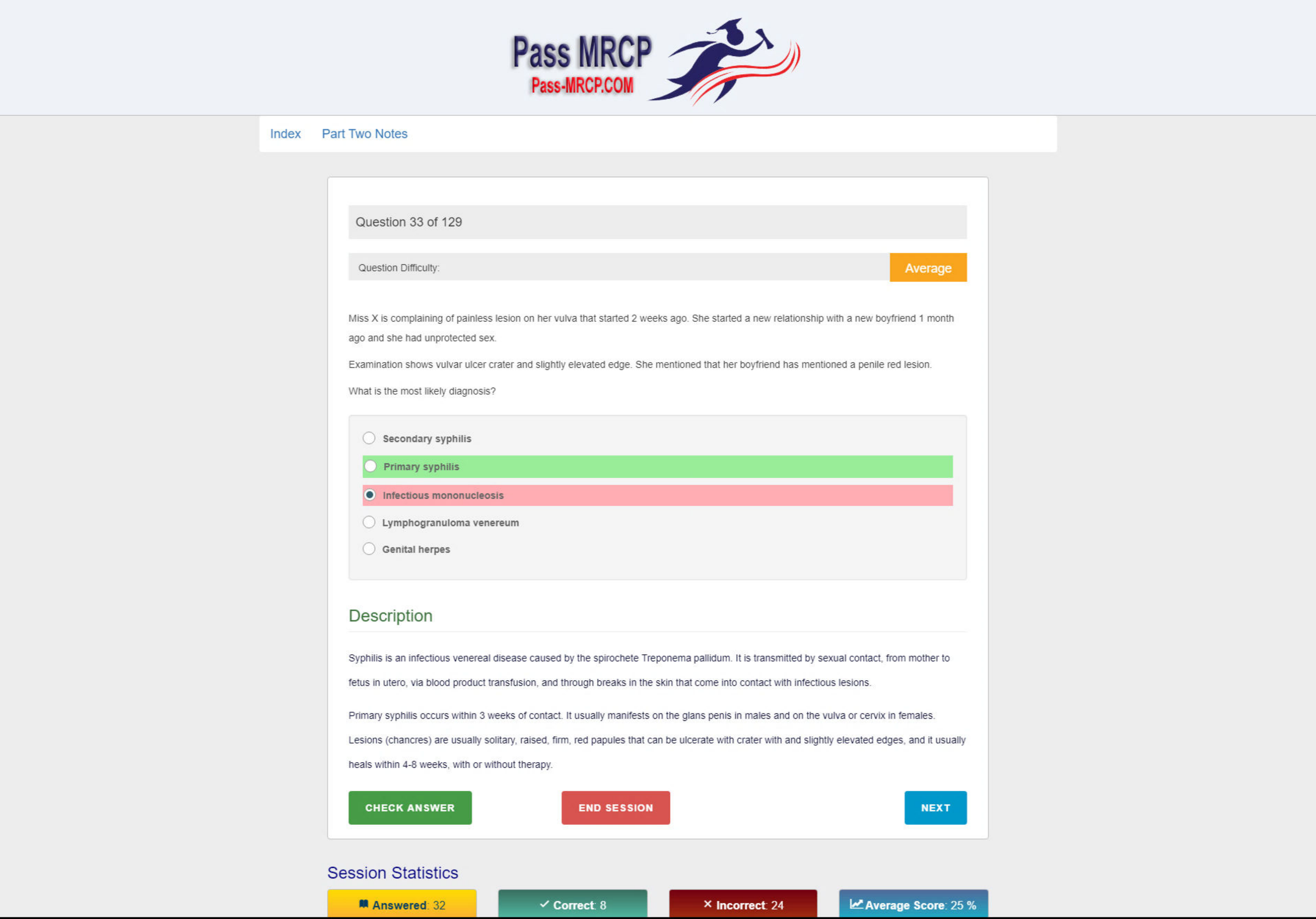
## Session Statistics

Answered: 31

✓ Correct: 8

✕ Incorrect: 23

Average Score: 25.81 %



Question 33 of 129

Question Difficulty: Average

Miss X is complaining of painless lesion on her vulva that started 2 weeks ago. She started a new relationship with a new boyfriend 1 month ago and she had unprotected sex.

Examination shows vulvar ulcer crater and slightly elevated edge. She mentioned that her boyfriend has mentioned a penile red lesion.

What is the most likely diagnosis?

- ○ **Secondary syphilis**
- ○ **Primary syphilis**
- ● **Infectious mononucleosis**
- ○ **Lymphogranuloma venereum**
- ○ **Genital herpes**

## Description

Syphilis is an infectious venereal disease caused by the spirochete Treponema pallidum. It is transmitted by sexual contact, from mother to fetus in utero, via blood product transfusion, and through breaks in the skin that come into contact with infectious lesions.

Primary syphilis occurs within 3 weeks of contact. It usually manifests on the glans penis in males and on the vulva or cervix in females. Lesions (chancres) are usually solitary, raised, firm, red papules that can be ulcerate with crater with and slightly elevated edges, and it usually heals within 4-8 weeks, with or without therapy.

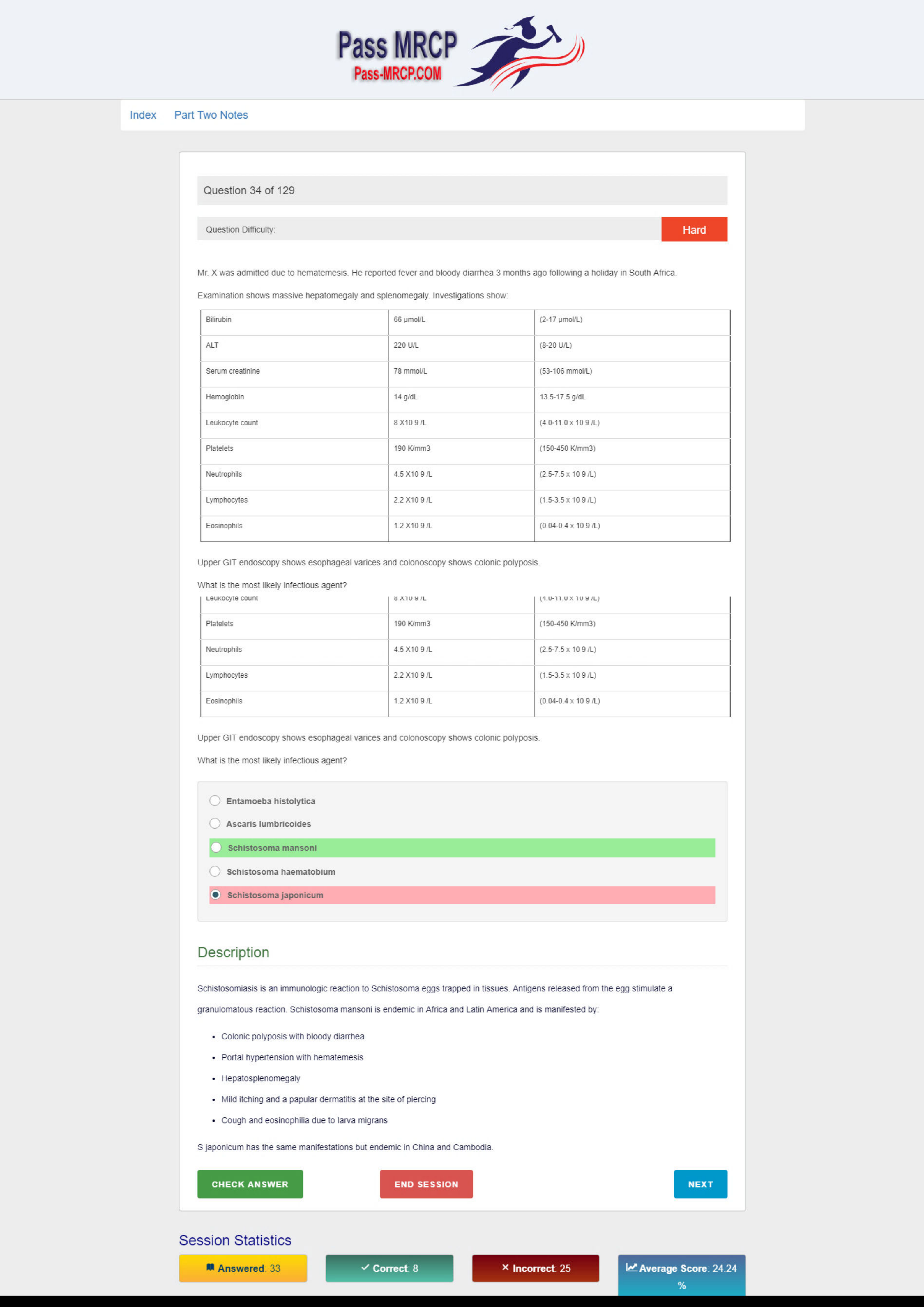
## Session Statistics

**Answered**: 32

✓ **Correct**: 8

✕ **Incorrect**: 24

**Average Score**: 25 %



Question 34 of 129

Question Difficulty: **Hard**

Mr. X was admitted due to hematemesis. He reported fever and bloody diarrhea 3 months ago following a holiday in South Africa.

Examination shows massive hepatomegaly and splenomegaly. Investigations show:

| | | |
|---|---|---|
| Bilirubin | 66 µmol/L | (2-17 µmol/L) |
| ALT | 220 U/L | (8-20 U/L) |
| Serum creatinine | 78 mmol/L | (53-106 mmol/L) |
| Hemoglobin | 14 g/dL | 13.5-17.5 g/dL |
| Leukocyte count | 8 X10 9 /L | (4.0-11.0 x 10 9 /L) |
| Platelets | 190 K/mm3 | (150-450 K/mm3) |
| Neutrophils | 4.5 X10 9 /L | (2.5-7.5 x 10 9 /L) |
| Lymphocytes | 2.2 X10 9 /L | (1.5-3.5 x 10 9 /L) |
| Eosinophils | 1.2 X10 9 /L | (0.04-0.4 x 10 9 /L) |

Upper GIT endoscopy shows esophageal varices and colonoscopy shows colonic polyposis.

What is the most likely infectious agent?

| | | |
|---|---|---|
| Leukocyte count | 8 X10 9 /L | (4.0-11.0 x 10 9 /L) |
| Platelets | 190 K/mm3 | (150-450 K/mm3) |
| Neutrophils | 4.5 X10 9 /L | (2.5-7.5 x 10 9 /L) |
| Lymphocytes | 2.2 X10 9 /L | (1.5-3.5 x 10 9 /L) |
| Eosinophils | 1.2 X10 9 /L | (0.04-0.4 x 10 9 /L) |

Upper GIT endoscopy shows esophageal varices and colonoscopy shows colonic polyposis.

What is the most likely infectious agent?

○ **Entamoeba histolytica**

○ **Ascaris lumbricoides**

○ **Schistosoma mansoni**

○ **Schistosoma haematobium**

● **Schistosoma japonicum**

## Description

Schistosomiasis is an immunologic reaction to Schistosoma eggs trapped in tissues. Antigens released from the egg stimulate a granulomatous reaction. Schistosoma mansoni is endemic in Africa and Latin America and is manifested by:

- Colonic polyposis with bloody diarrhea
- Portal hypertension with hematemesis
- Hepatosplenomegaly
- Mild itching and a papular dermatitis at the site of piercing
- Cough and eosinophilia due to larva migrans

S japonicum has the same manifestations but endemic in China and Cambodia.

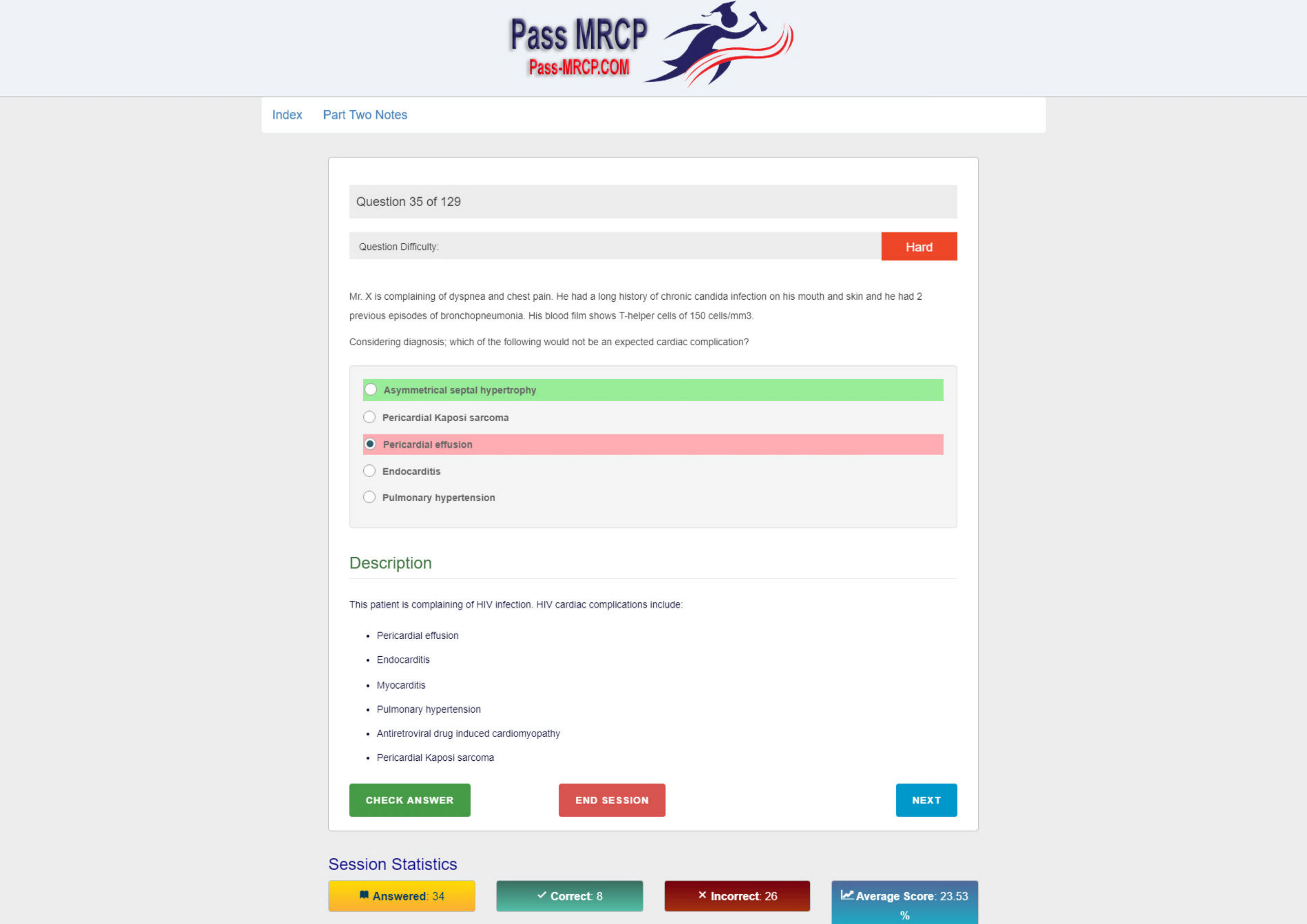
## Session Statistics

**Answered**: 33

✓ **Correct**: 8

✕ **Incorrect**: 25

**Average Score**: 24.24 %



Question 35 of 129

Question Difficulty: **Hard**

Mr. X is complaining of dyspnea and chest pain. He had a long history of chronic candida infection on his mouth and skin and he had 2 previous episodes of bronchopneumonia. His blood film shows T-helper cells of 150 cells/mm3.

Considering diagnosis; which of the following would not be an expected cardiac complication?

○ **Asymmetrical septal hypertrophy**
○ **Pericardial Kaposi sarcoma**
● **Pericardial effusion**
○ **Endocarditis**
○ **Pulmonary hypertension**

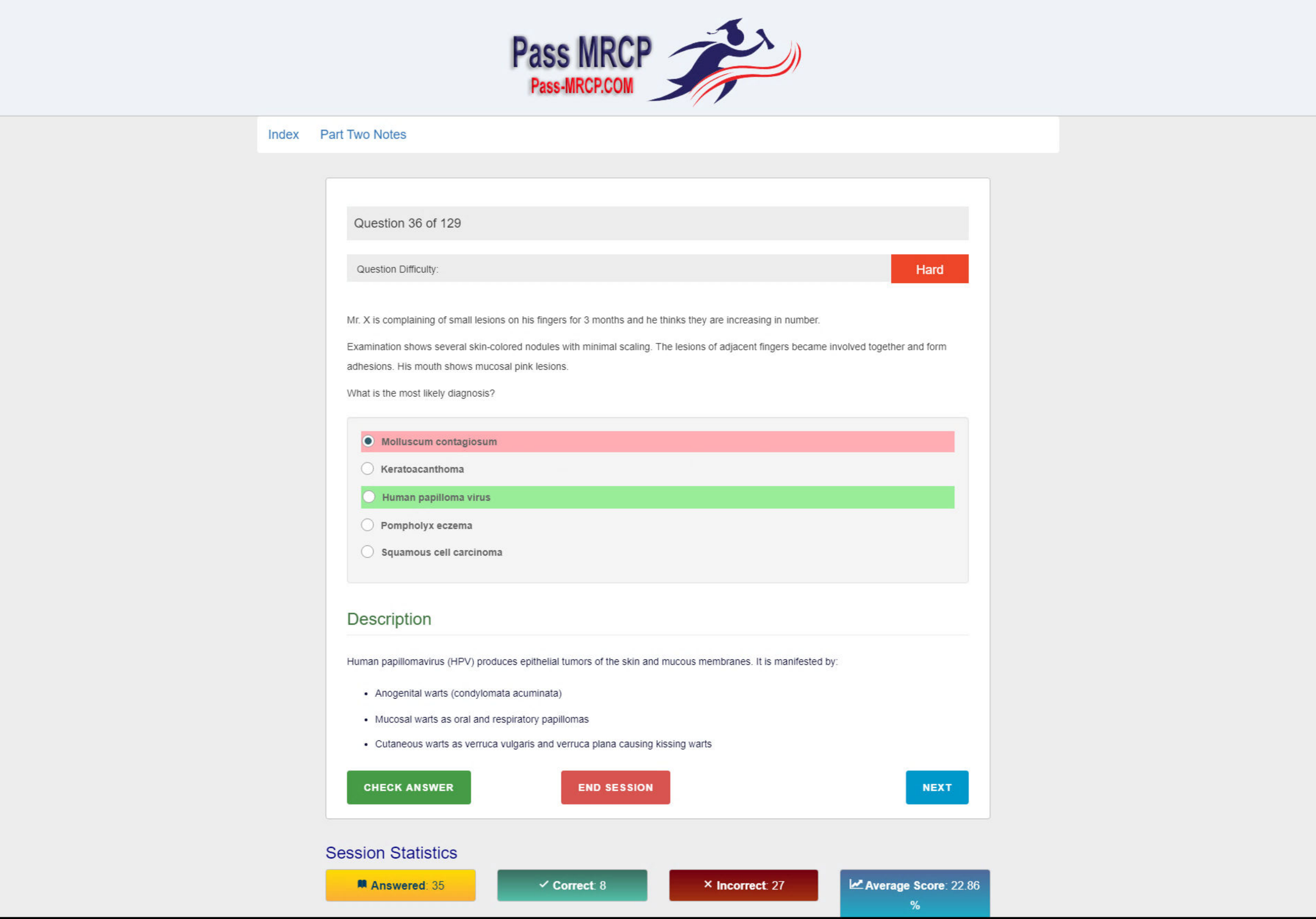
## Description

This patient is complaining of HIV infection. HIV cardiac complications include:

- Pericardial effusion
- Endocarditis
- Myocarditis
- Pulmonary hypertension
- Antiretroviral drug induced cardiomyopathy
- Pericardial Kaposi sarcoma

Session Statistics

**Answered**: 34
**Correct**: 8
**Incorrect**: 26
**Average Score**: 23.53 %



Question 36 of 129

Question Difficulty: Hard

Mr. X is complaining of small lesions on his fingers for 3 months and he thinks they are increasing in number.

Examination shows several skin-colored nodules with minimal scaling. The lesions of adjacent fingers became involved together and form adhesions. His mouth shows mucosal pink lesions.

What is the most likely diagnosis?

● Molluscum contagiosum
○ Keratoacanthoma
○ Human papilloma virus
○ Pompholyx eczema
○ Squamous cell carcinoma

## Description

Human papillomavirus (HPV) produces epithelial tumors of the skin and mucous membranes. It is manifested by:

- Anogenital warts (condylomata acuminata)
- Mucosal warts as oral and respiratory papillomas
- Cutaneous warts as verruca vulgaris and verruca plana causing kissing warts

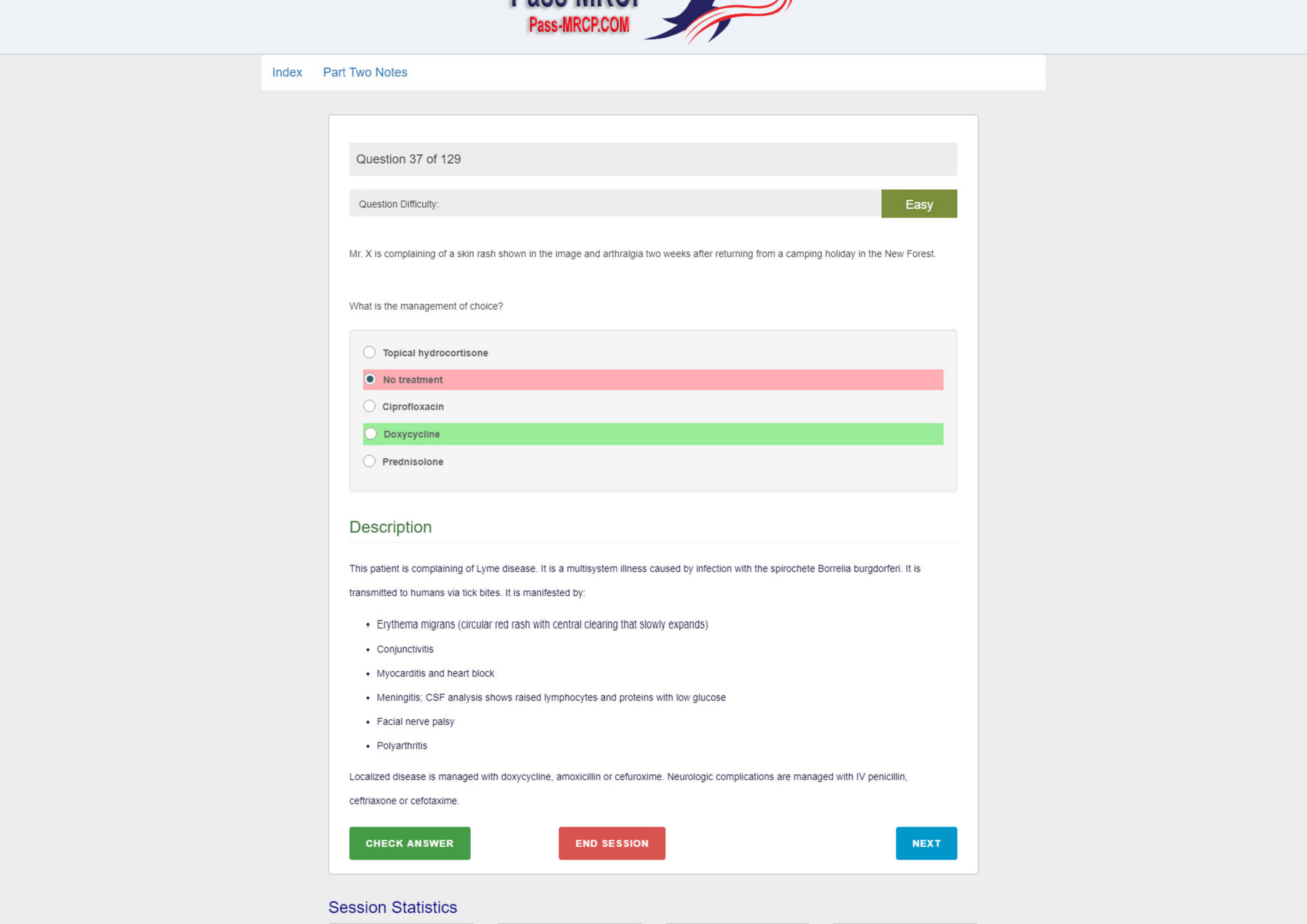
Session Statistics

Answered: 35

✓ Correct: 8

✕ Incorrect: 27

Average Score: 22.86 %



Question 37 of 129

Question Difficulty: Easy

Mr. X is complaining of a skin rash shown in the image and arthralgia two weeks after returning from a camping holiday in the New Forest.

What is the management of choice?

○ **Topical hydrocortisone**
● **No treatment**
○ **Ciprofloxacin**
○ **Doxycycline**
○ **Prednisolone**

## Description

This patient is complaining of Lyme disease. It is a multisystem illness caused by infection with the spirochete Borrelia burgdorferi. It is transmitted to humans via tick bites. It is manifested by:

- Erythema migrans (circular red rash with central clearing that slowly expands)
- Conjunctivitis
- Myocarditis and heart block
- Meningitis; CSF analysis shows raised lymphocytes and proteins with low glucose
- Facial nerve palsy
- Polyarthritis

Localized disease is managed with doxycycline, amoxicillin or cefuroxime. Neurologic complications are managed with IV penicillin, ceftriaxone or cefotaxime.

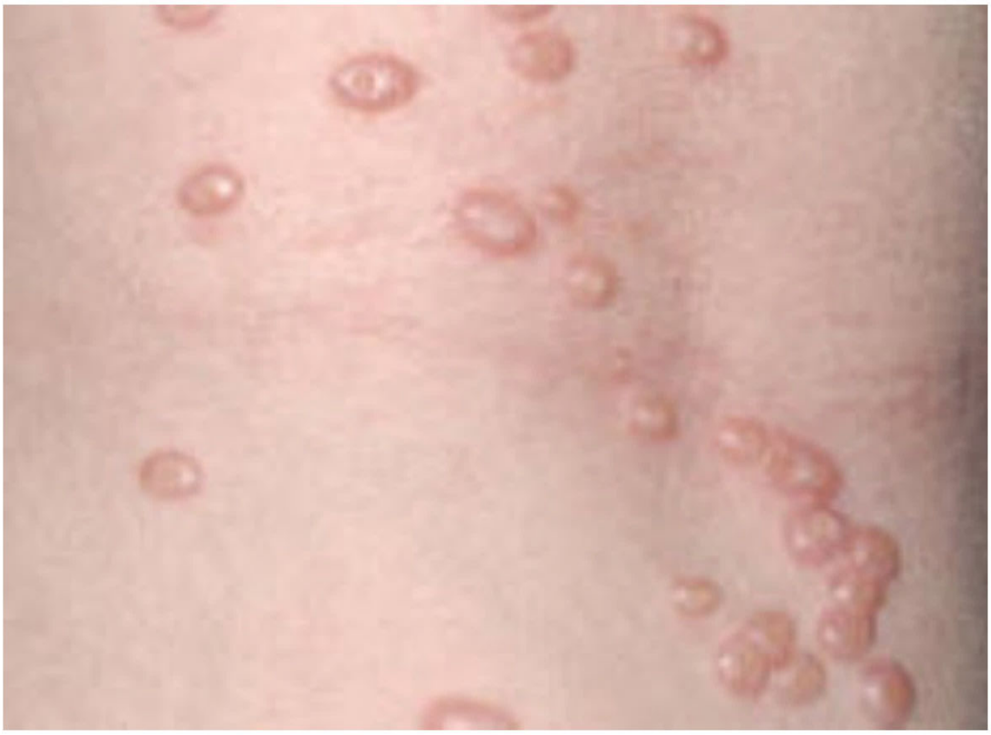
Session Statistics

Question 38 of 129

Question Difficulty: **Easy**

12 years old boy is complaining of diffuse rashes on his skin for 8 months. His mother denied the presence of any fever.

Examination shows painless small, skin colored papules with central umbilication on his arms, legs and trunk. There are no vesicles covering the papules and no erythema surrounding the lesions. His mouth is free of lesions.



What is the most likely diagnosis?

○ **Shingles**
○ **Infectious mononucleosis**
○ **Chickenpox**
○ **Molluscum contagiosum**
● **Herpes simplex type 1**

## Description

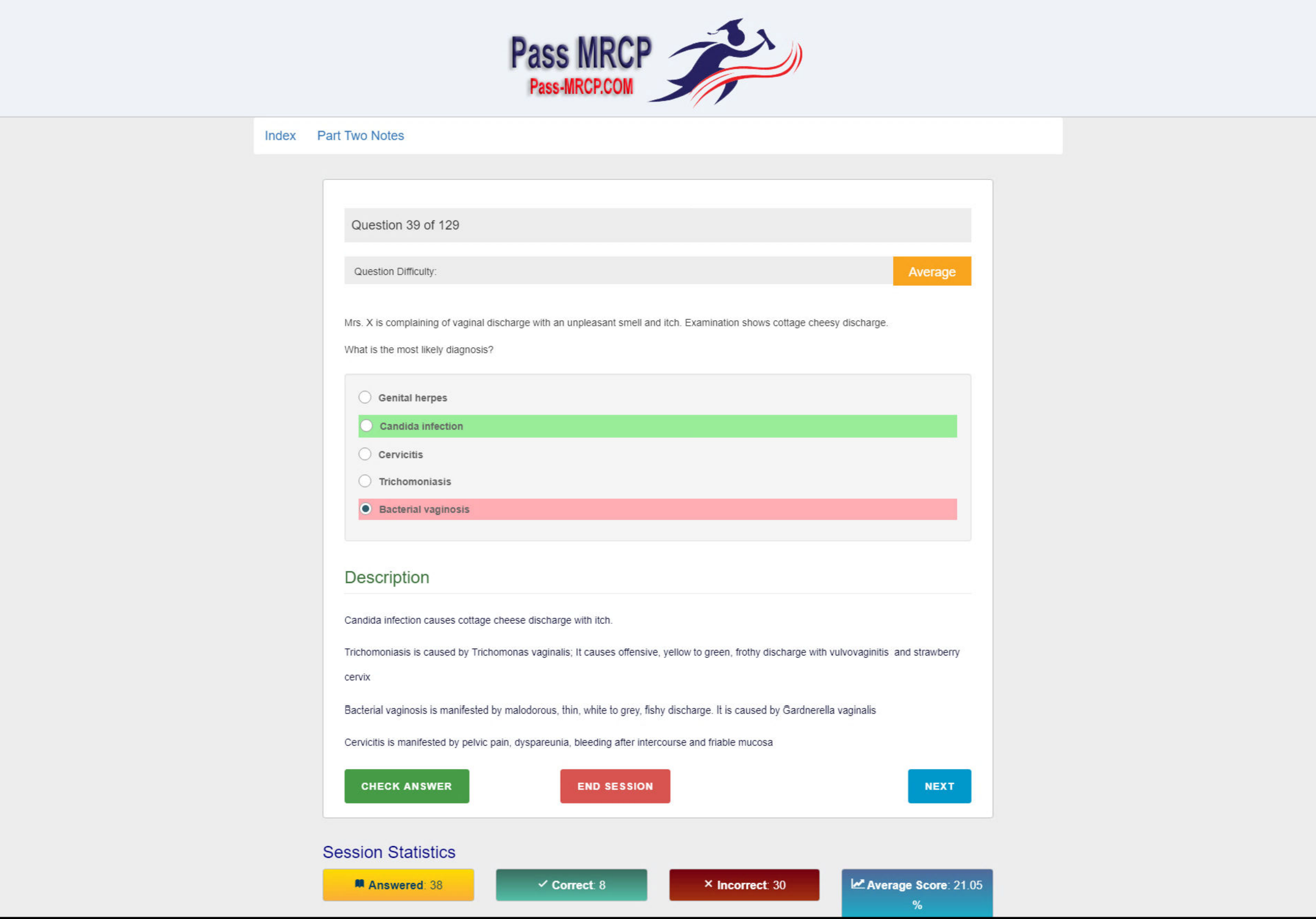
Molluscum contagiosum is differentiated from chickenpox by:

- The lesions are small, skin colored papules with central umbilication but no vesicles
- There is no erythema surrounding lesions
- It does not affect the mucus membranes
- Lesions can persist for up to a year

CHECK ANSWER END SESSION NEXT

## Session Statistics

**Answered**: 37 ✓ **Correct**: 8 ✕ **Incorrect**: 29 **Average Score**: 21.62 %



Question 39 of 129

Question Difficulty: Average

Mrs. X is complaining of vaginal discharge with an unpleasant smell and itch. Examination shows cottage cheesy discharge.

What is the most likely diagnosis?

- ○ Genital herpes
- ○ Candida infection
- ○ Cervicitis
- ○ Trichomoniasis
- ● Bacterial vaginosis

## Description

Candida infection causes cottage cheese discharge with itch.

Trichomoniasis is caused by Trichomonas vaginalis; It causes offensive, yellow to green, frothy discharge with vulvovaginitis and strawberry cervix

Bacterial vaginosis is manifested by malodorous, thin, white to grey, fishy discharge. It is caused by Gardnerella vaginalis

Cervicitis is manifested by pelvic pain, dyspareunia, bleeding after intercourse and friable mucosa

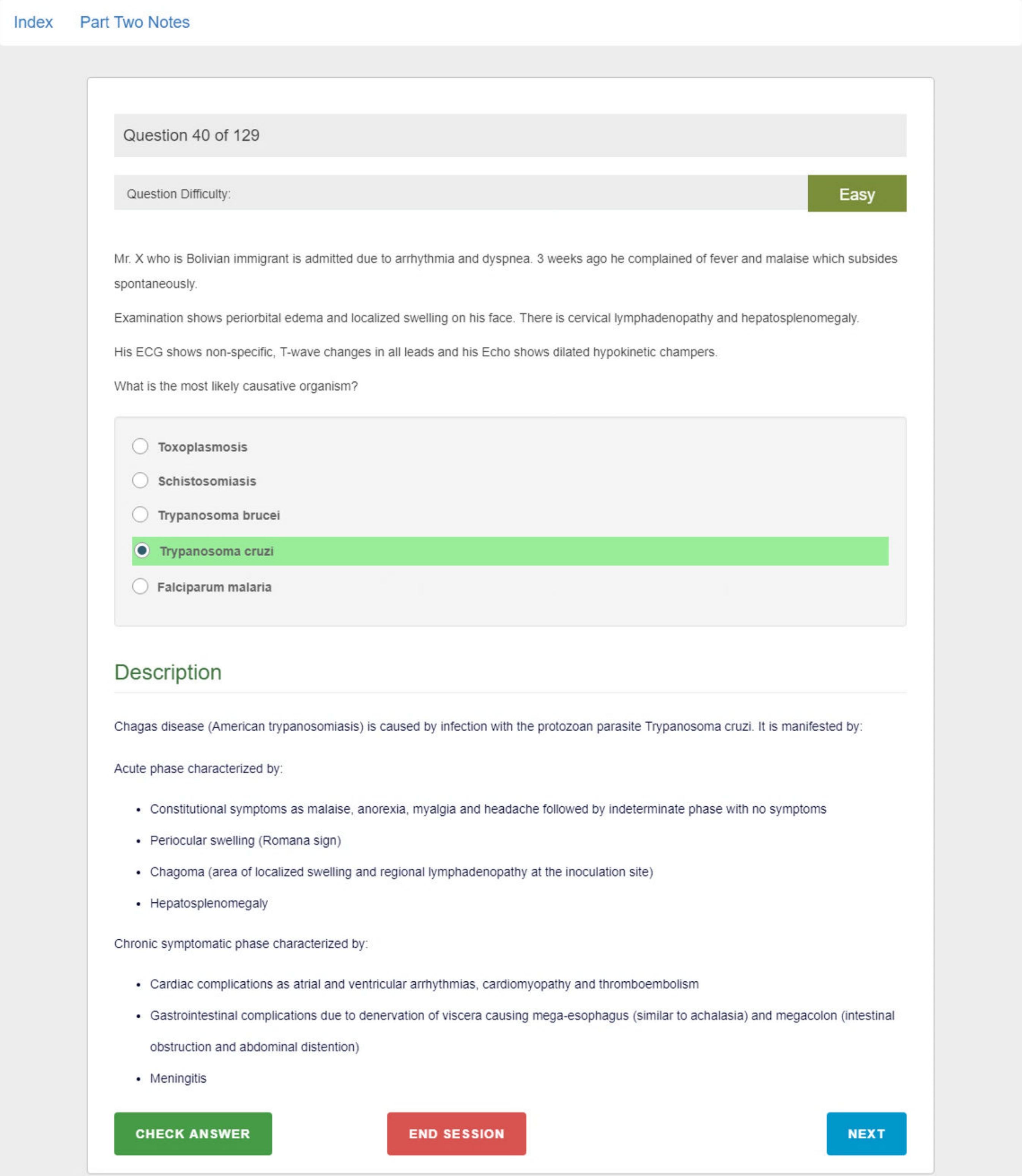
Session Statistics

Answered: 38

✓ Correct: 8

✕ Incorrect: 30

Average Score: 21.05 %



Question 40 of 129

Question Difficulty: Easy

Mr. X who is Bolivian immigrant is admitted due to arrhythmia and dyspnea. 3 weeks ago he complained of fever and malaise which subsides spontaneously.

Examination shows periorbital edema and localized swelling on his face. There is cervical lymphadenopathy and hepatosplenomegaly.

His ECG shows non-specific, T-wave changes in all leads and his Echo shows dilated hypokinetic champers.

What is the most likely causative organism?

○ **Toxoplasmosis**
○ **Schistosomiasis**
○ **Trypanosoma brucei**
● **Trypanosoma cruzi**
○ **Falciparum malaria**

## Description

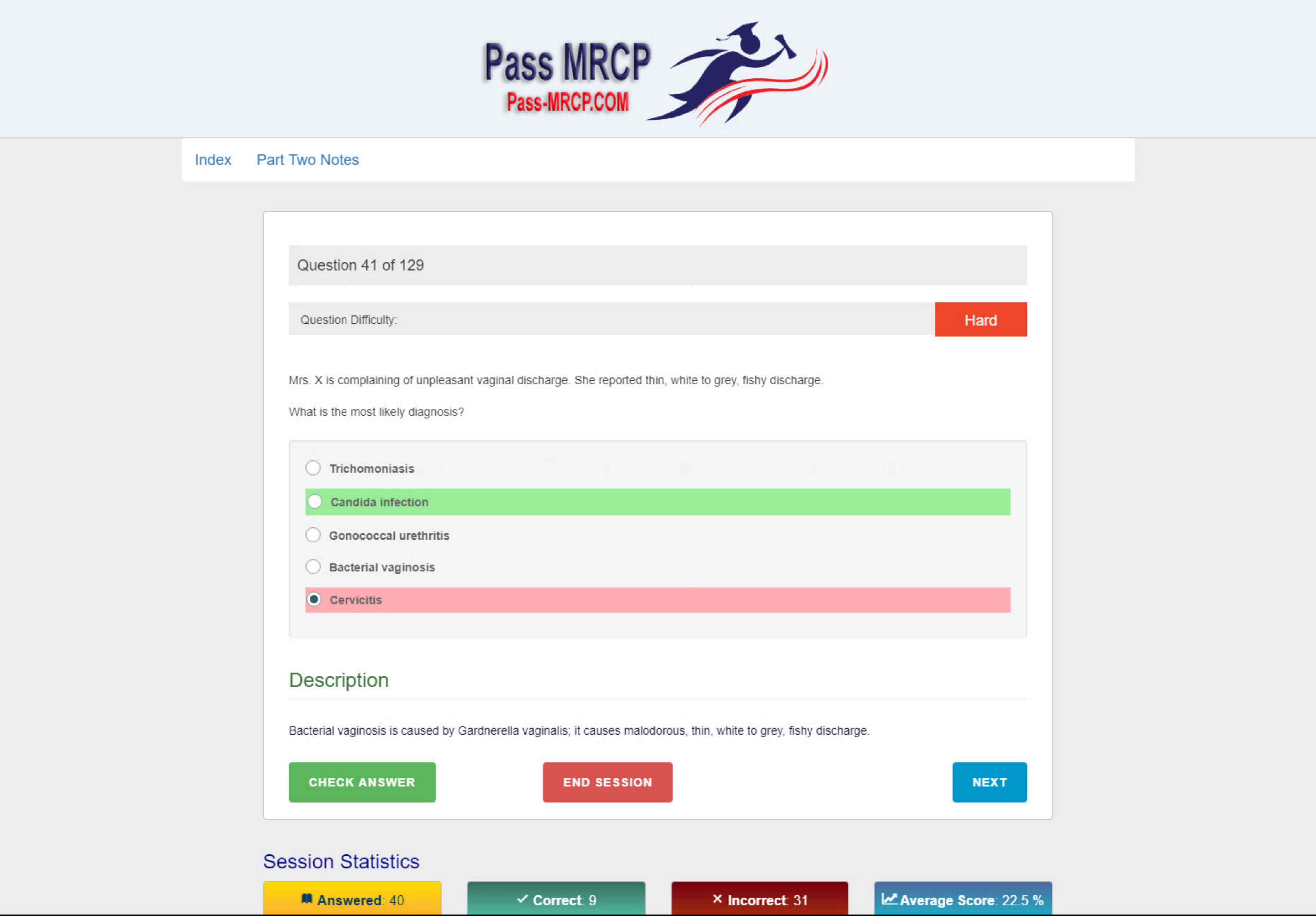
Chagas disease (American trypanosomiasis) is caused by infection with the protozoan parasite Trypanosoma cruzi. It is manifested by:

Acute phase characterized by:

- Constitutional symptoms as malaise, anorexia, myalgia and headache followed by indeterminate phase with no symptoms
- Periocular swelling (Romana sign)
- Chagoma (area of localized swelling and regional lymphadenopathy at the inoculation site)
- Hepatosplenomegaly

Chronic symptomatic phase characterized by:

- Cardiac complications as atrial and ventricular arrhythmias, cardiomyopathy and thromboembolism
- Gastrointestinal complications due to denervation of viscera causing mega-esophagus (similar to achalasia) and megacolon (intestinal obstruction and abdominal distention)
- Meningitis



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Question 41 of 129

Question Difficulty: Hard

Mrs. X is complaining of unpleasant vaginal discharge. She reported thin, white to grey, fishy discharge.

What is the most likely diagnosis?

- ○ Trichomoniasis
- ○ Candida infection
- ○ Gonococcal urethritis
- ○ Bacterial vaginosis
- ● Cervicitis

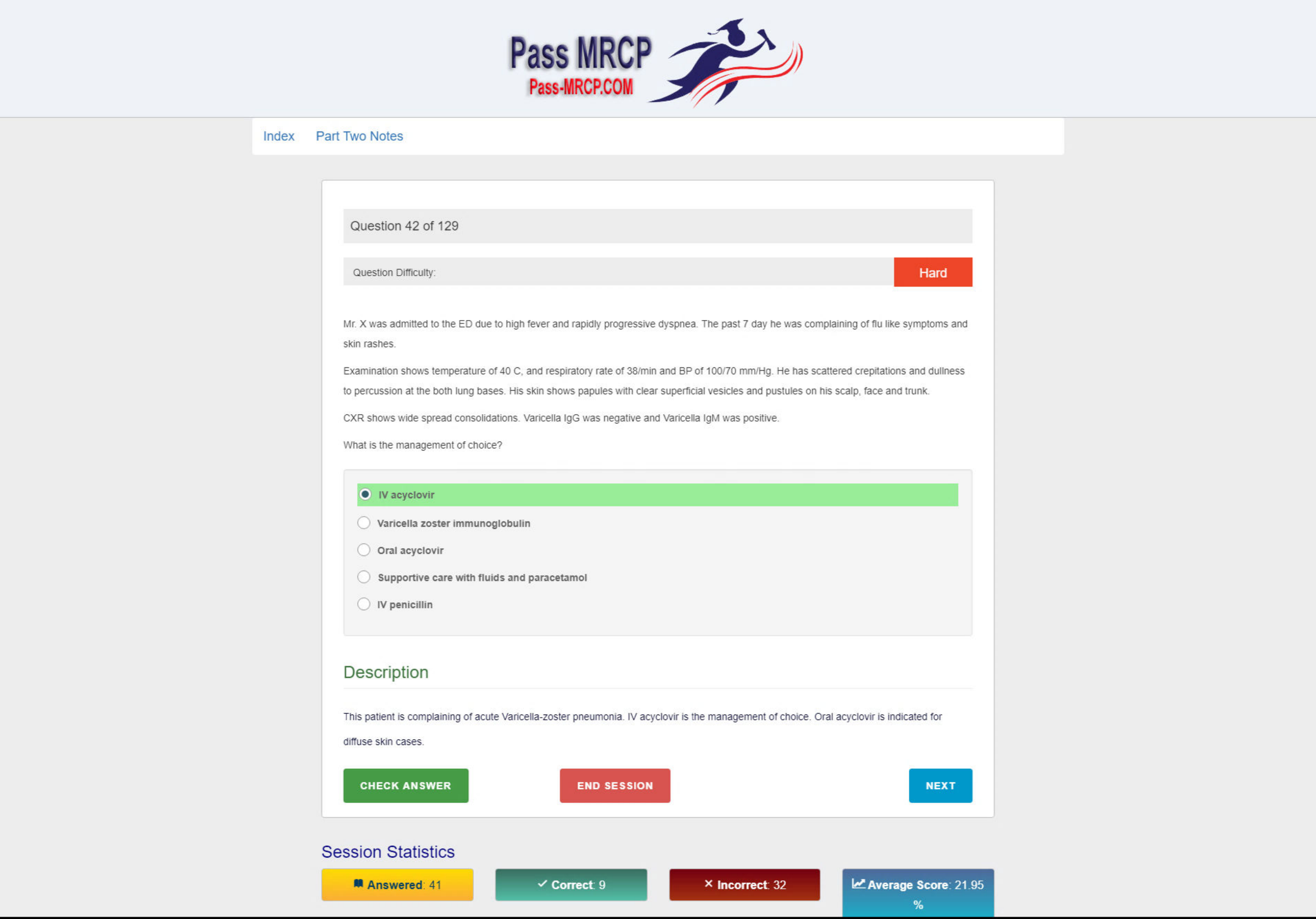
## Description

Bacterial vaginosis is caused by Gardnerella vaginalis; it causes malodorous, thin, white to grey, fishy discharge.

CHECK ANSWER
END SESSION
NEXT

## Session Statistics

**Answered**: 40
✓ **Correct**: 9
✕ **Incorrect**: 31
**Average Score**: 22.5 %



Question 42 of 129

Question Difficulty: **Hard**

Mr. X was admitted to the ED due to high fever and rapidly progressive dyspnea. The past 7 day he was complaining of flu like symptoms and skin rashes.

Examination shows temperature of 40 C, and respiratory rate of 38/min and BP of 100/70 mm/Hg. He has scattered crepitations and dullness to percussion at the both lung bases. His skin shows papules with clear superficial vesicles and pustules on his scalp, face and trunk.

CXR shows wide spread consolidations. Varicella IgG was negative and Varicella IgM was positive.

What is the management of choice?

- ● **IV acyclovir**
- ○ **Varicella zoster immunoglobulin**
- ○ **Oral acyclovir**
- ○ **Supportive care with fluids and paracetamol**
- ○ **IV penicillin**

## Description

This patient is complaining of acute Varicella-zoster pneumonia. IV acyclovir is the management of choice. Oral acyclovir is indicated for diffuse skin cases.

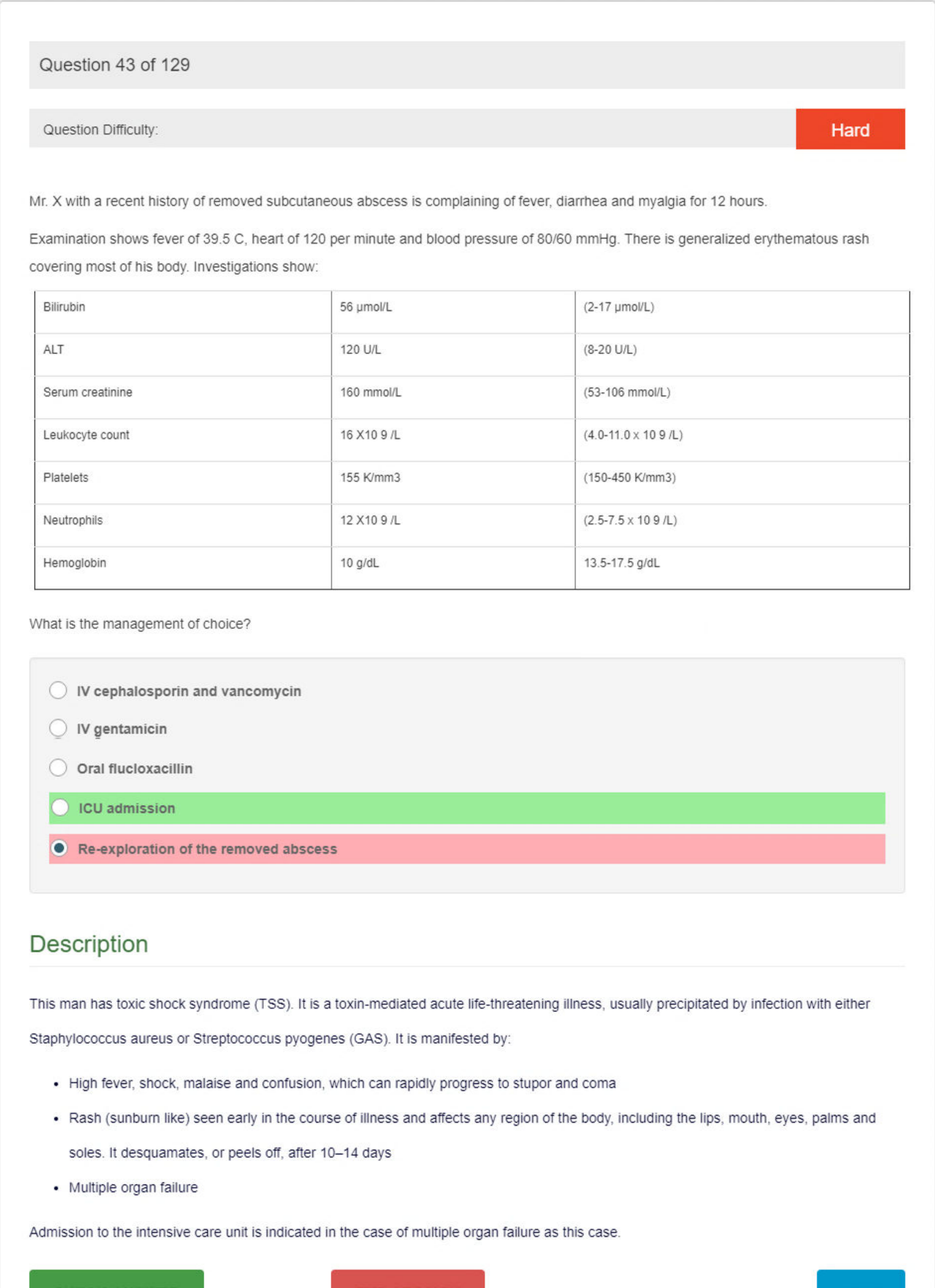
## Session Statistics

**Answered**: 41

✓ **Correct**: 9

× **Incorrect**: 32

**Average Score**: 21.95 %



Question 43 of 129

Question Difficulty: **Hard**

Mr. X with a recent history of removed subcutaneous abscess is complaining of fever, diarrhea and myalgia for 12 hours.

Examination shows fever of 39.5 C, heart of 120 per minute and blood pressure of 80/60 mmHg. There is generalized erythematous rash covering most of his body. Investigations show:

| | | |
|---|---|---|
| Bilirubin | 56 µmol/L | (2-17 µmol/L) |
| ALT | 120 U/L | (8-20 U/L) |
| Serum creatinine | 160 mmol/L | (53-106 mmol/L) |
| Leukocyte count | 16 X10 9 /L | (4.0-11.0 x 10 9 /L) |
| Platelets | 155 K/mm3 | (150-450 K/mm3) |
| Neutrophils | 12 X10 9 /L | (2.5-7.5 x 10 9 /L) |
| Hemoglobin | 10 g/dL | 13.5-17.5 g/dL |

What is the management of choice?

○ **IV cephalosporin and vancomycin**

○ **IV gentamicin**

○ **Oral flucloxacillin**

○ **ICU admission**

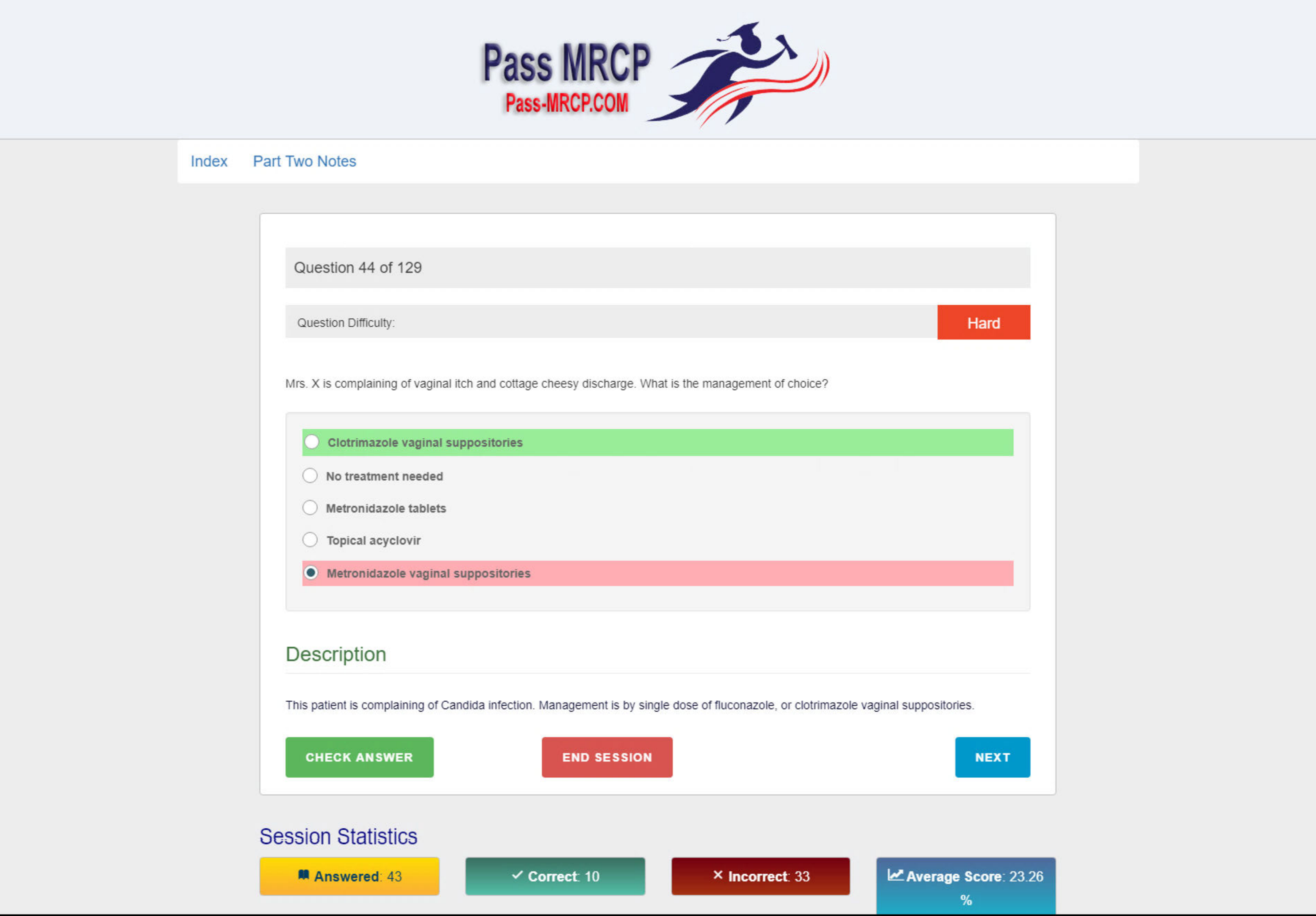
● **Re-exploration of the removed abscess**

## Description

This man has toxic shock syndrome (TSS). It is a toxin-mediated acute life-threatening illness, usually precipitated by infection with either Staphylococcus aureus or Streptococcus pyogenes (GAS). It is manifested by:

- High fever, shock, malaise and confusion, which can rapidly progress to stupor and coma
- Rash (sunburn like) seen early in the course of illness and affects any region of the body, including the lips, mouth, eyes, palms and soles. It desquamates, or peels off, after 10–14 days
- Multiple organ failure

Admission to the intensive care unit is indicated in the case of multiple organ failure as this case.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Question 44 of 129

Question Difficulty: Hard

Mrs. X is complaining of vaginal itch and cottage cheesy discharge. What is the management of choice?

- ○ **Clotrimazole vaginal suppositories**
- ○ **No treatment needed**
- ○ **Metronidazole tablets**
- ○ **Topical acyclovir**
- ● **Metronidazole vaginal suppositories**

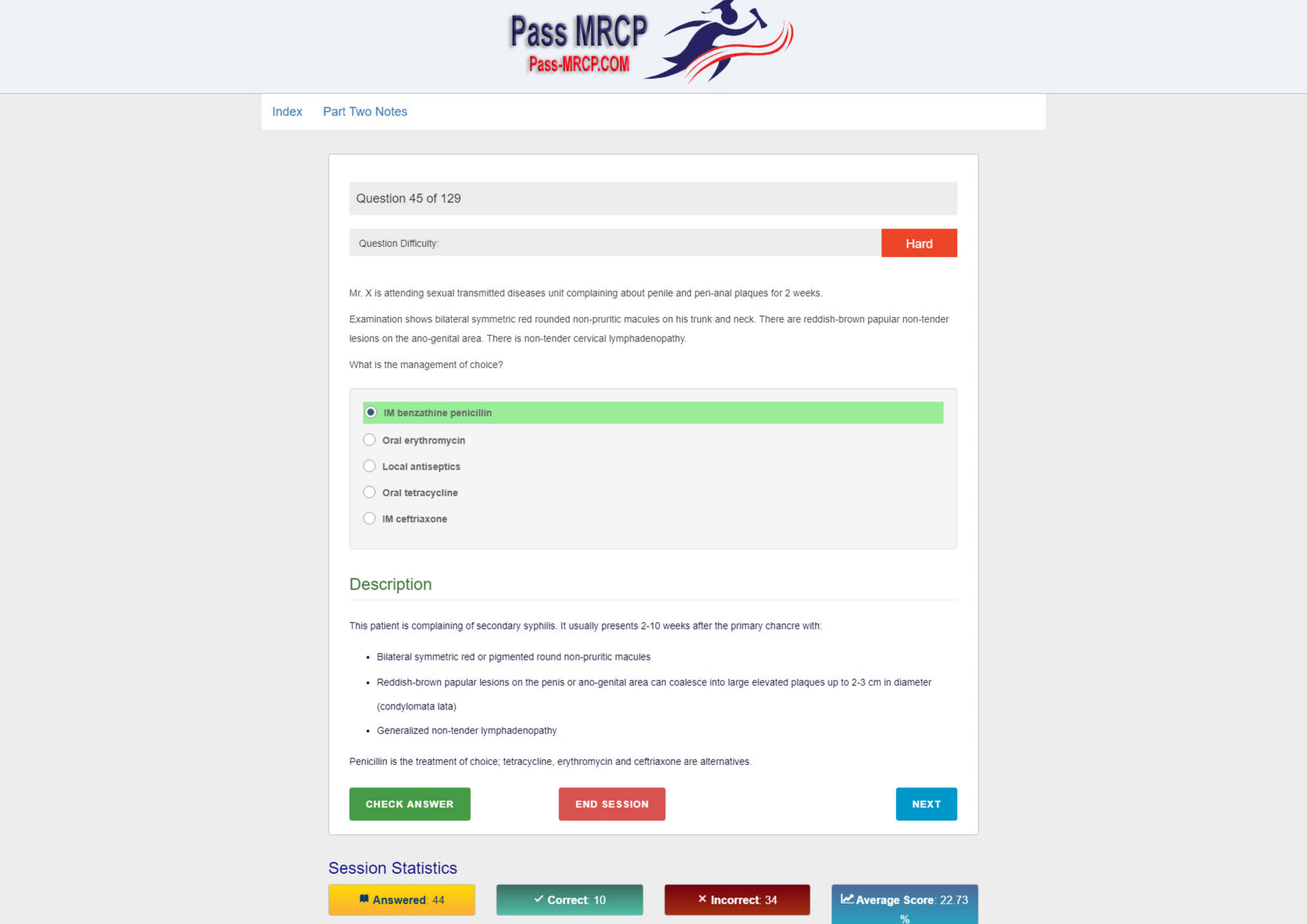
## Description

This patient is complaining of Candida infection. Management is by single dose of fluconazole, or clotrimazole vaginal suppositories.

CHECK ANSWER
END SESSION
NEXT

## Session Statistics

**Answered**: 43
✓ **Correct**: 10
× **Incorrect**: 33
**Average Score**: 23.26 %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Question 45 of 129

Question Difficulty: Hard

Mr. X is attending sexual transmitted diseases unit complaining about penile and peri-anal plaques for 2 weeks.

Examination shows bilateral symmetric red rounded non-pruritic macules on his trunk and neck. There are reddish-brown papular non-tender lesions on the ano-genital area. There is non-tender cervical lymphadenopathy.

What is the management of choice?

● **IM benzathine penicillin**
○ **Oral erythromycin**
○ **Local antiseptics**
○ **Oral tetracycline**
○ **IM ceftriaxone**

## Description

This patient is complaining of secondary syphilis. It usually presents 2-10 weeks after the primary chancre with:

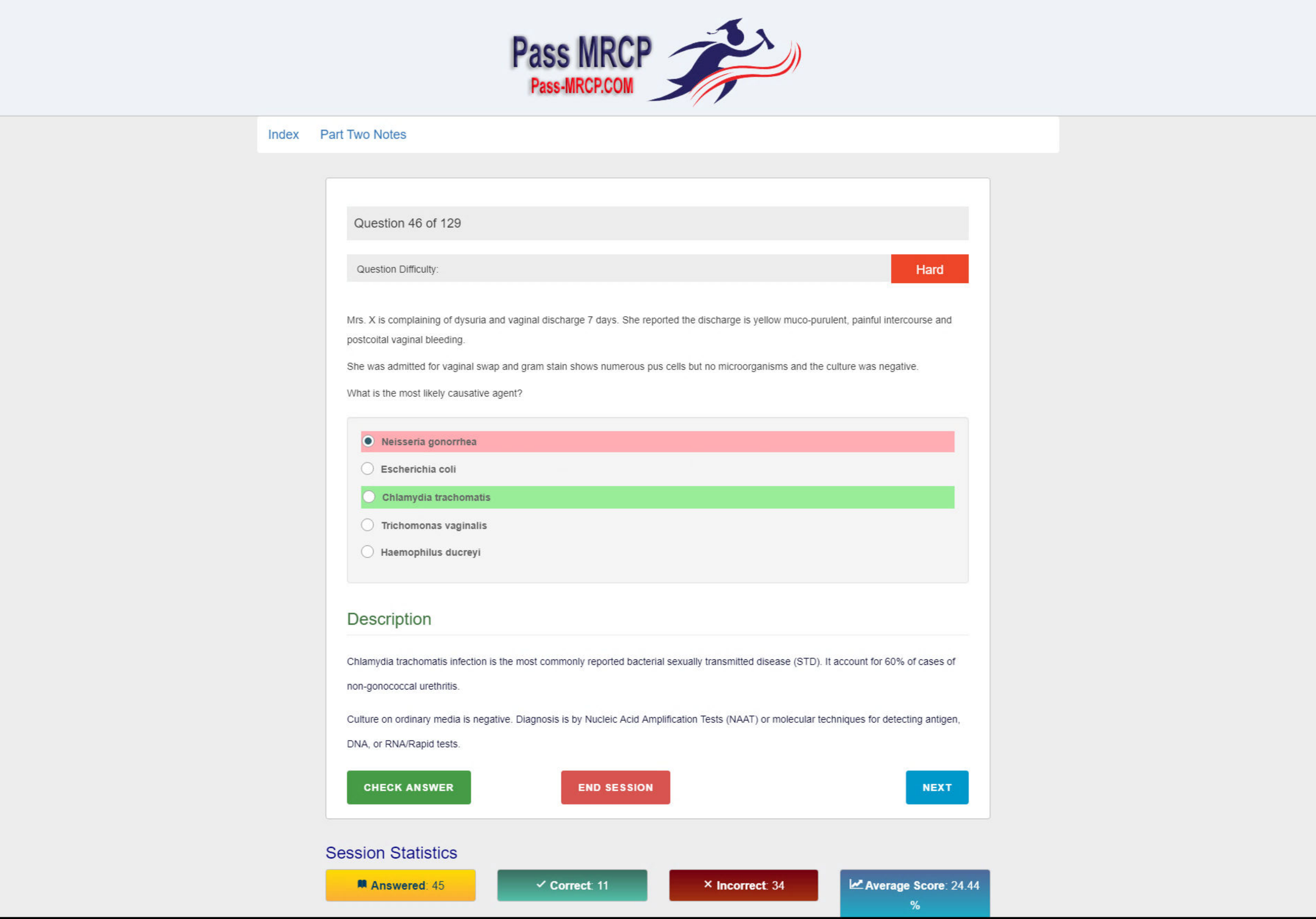
- Bilateral symmetric red or pigmented round non-pruritic macules
- Reddish-brown papular lesions on the penis or ano-genital area can coalesce into large elevated plaques up to 2-3 cm in diameter (condylomata lata)
- Generalized non-tender lymphadenopathy

Penicillin is the treatment of choice; tetracycline, erythromycin and ceftriaxone are alternatives.

CHECK ANSWER
END SESSION
NEXT

Session Statistics

Answered: 44
✓ Correct: 10
✕ Incorrect: 34
Average Score: 22.73 %



Question 46 of 129

Question Difficulty: **Hard**

Mrs. X is complaining of dysuria and vaginal discharge 7 days. She reported the discharge is yellow muco-purulent, painful intercourse and postcoital vaginal bleeding.

She was admitted for vaginal swap and gram stain shows numerous pus cells but no microorganisms and the culture was negative.

What is the most likely causative agent?

- ● **Neisseria gonorrhea**
- ○ **Escherichia coli**
- ○ **Chlamydia trachomatis**
- ○ **Trichomonas vaginalis**
- ○ **Haemophilus ducreyi**

## Description

Chlamydia trachomatis infection is the most commonly reported bacterial sexually transmitted disease (STD). It account for 60% of cases of non-gonococcal urethritis.

Culture on ordinary media is negative. Diagnosis is by Nucleic Acid Amplification Tests (NAAT) or molecular techniques for detecting antigen, DNA, or RNA/Rapid tests.

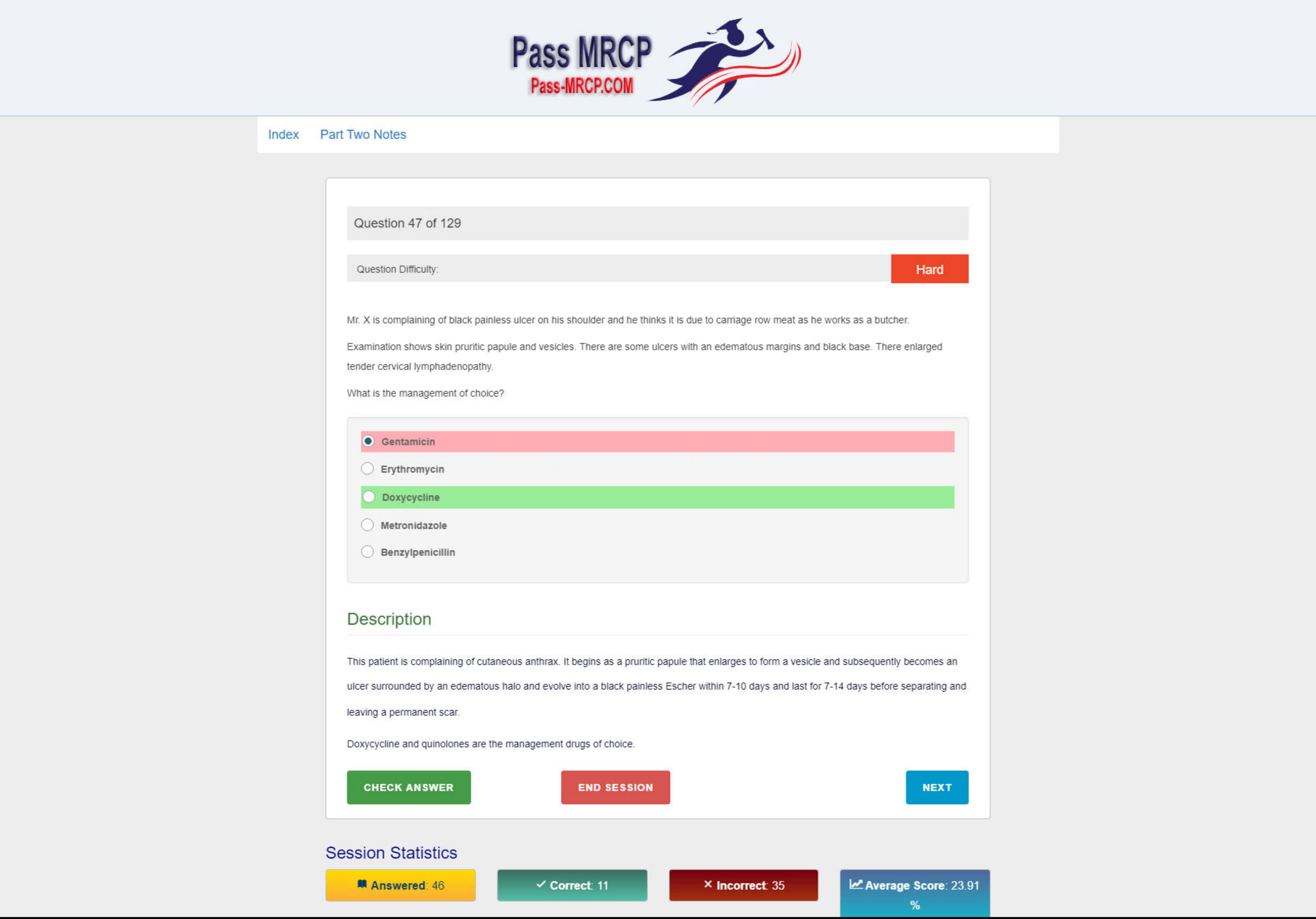
## Session Statistics

**Answered**: 45

✓ **Correct**: 11

✕ **Incorrect**: 34

**Average Score**: 24.44 %



Question 47 of 129

Question Difficulty: Hard

Mr. X is complaining of black painless ulcer on his shoulder and he thinks it is due to carriage row meat as he works as a butcher.

Examination shows skin pruritic papule and vesicles. There are some ulcers with an edematous margins and black base. There enlarged tender cervical lymphadenopathy.

What is the management of choice?

● Gentamicin
○ Erythromycin
○ Doxycycline
○ Metronidazole
○ Benzylpenicillin

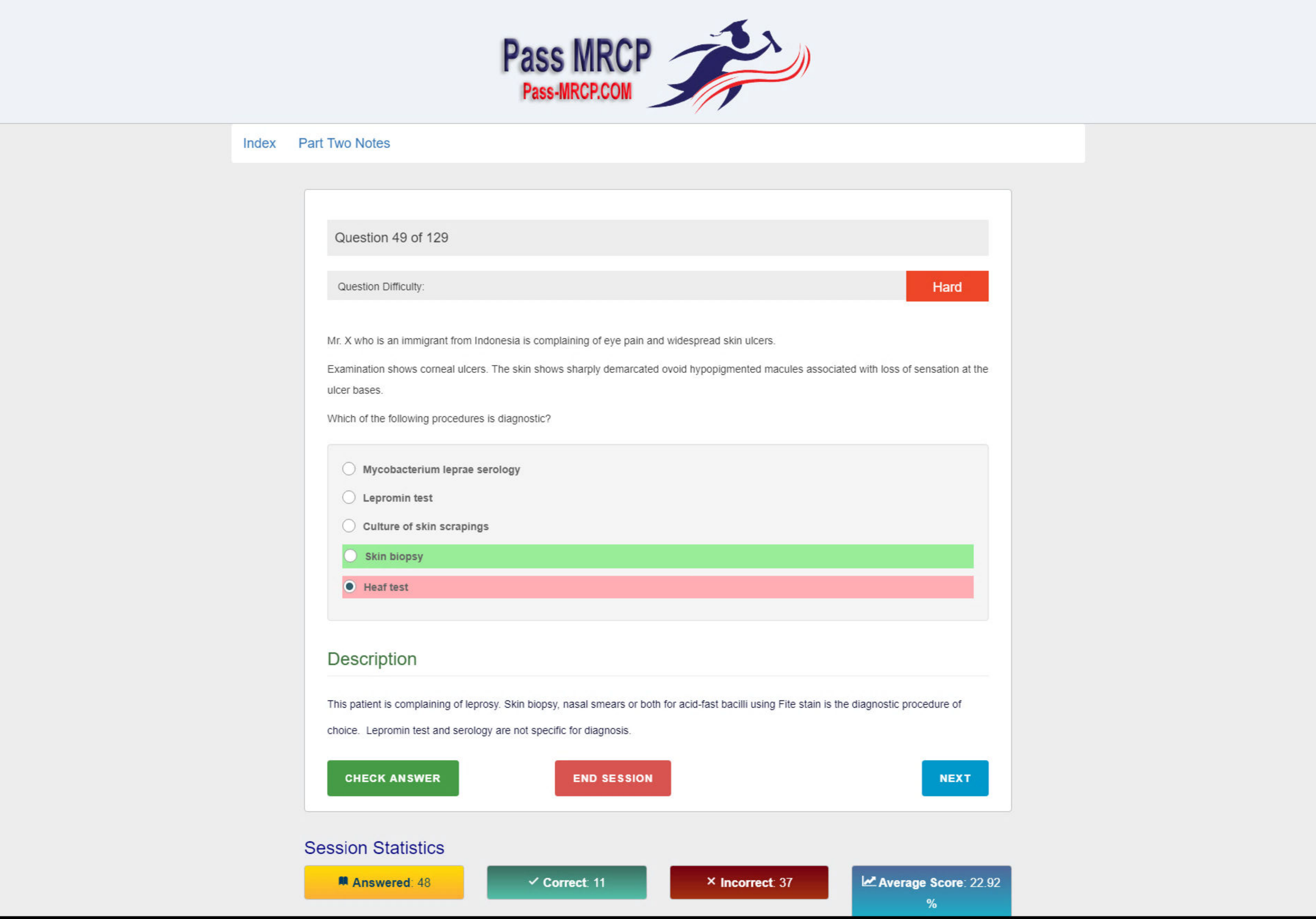
## Description

This patient is complaining of cutaneous anthrax. It begins as a pruritic papule that enlarges to form a vesicle and subsequently becomes an ulcer surrounded by an edematous halo and evolve into a black painless Escher within 7-10 days and last for 7-14 days before separating and leaving a permanent scar.

Doxycycline and quinolones are the management drugs of choice.

Session Statistics

Answered: 46
Correct: 11
Incorrect: 35
Average Score: 23.91 %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Question Difficulty: Hard

Mr. X who is an immigrant from Indonesia is complaining of eye pain and widespread skin ulcers.

Examination shows corneal ulcers. The skin shows sharply demarcated ovoid hypopigmented macules associated with loss of sensation at the ulcer bases.

Which of the following procedures is diagnostic?

○ **Mycobacterium leprae serology**
○ **Lepromin test**
○ **Culture of skin scrapings**
○ **Skin biopsy**
● **Heaf test**

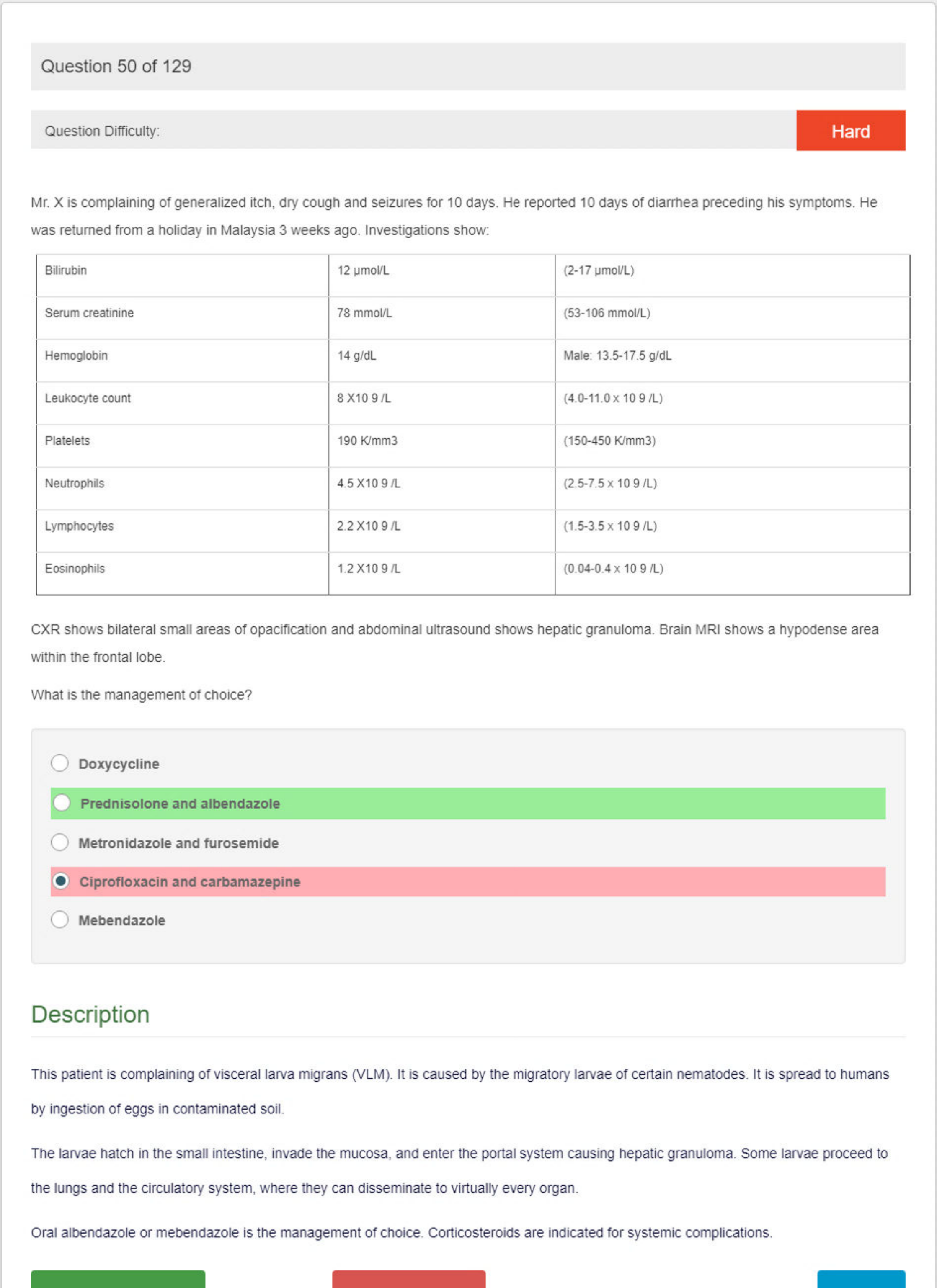
## Description

This patient is complaining of leprosy. Skin biopsy, nasal smears or both for acid-fast bacilli using Fite stain is the diagnostic procedure of choice. Lepromin test and serology are not specific for diagnosis.

CHECK ANSWER
END SESSION
NEXT

## Session Statistics

**Answered**: 48
✓ **Correct**: 11
✕ **Incorrect**: 37
**Average Score**: 22.92 %



Question 50 of 129

Question Difficulty: **Hard**

Mr. X is complaining of generalized itch, dry cough and seizures for 10 days. He reported 10 days of diarrhea preceding his symptoms. He was returned from a holiday in Malaysia 3 weeks ago. Investigations show:

| | | |
|---|---|---|
| Bilirubin | 12 µmol/L | (2-17 µmol/L) |
| Serum creatinine | 78 mmol/L | (53-106 mmol/L) |
| Hemoglobin | 14 g/dL | Male: 13.5-17.5 g/dL |
| Leukocyte count | 8 X10 9 /L | (4.0-11.0 x 10 9 /L) |
| Platelets | 190 K/mm3 | (150-450 K/mm3) |
| Neutrophils | 4.5 X10 9 /L | (2.5-7.5 x 10 9 /L) |
| Lymphocytes | 2.2 X10 9 /L | (1.5-3.5 x 10 9 /L) |
| Eosinophils | 1.2 X10 9 /L | (0.04-0.4 x 10 9 /L) |

CXR shows bilateral small areas of opacification and abdominal ultrasound shows hepatic granuloma. Brain MRI shows a hypodense area within the frontal lobe.

What is the management of choice?

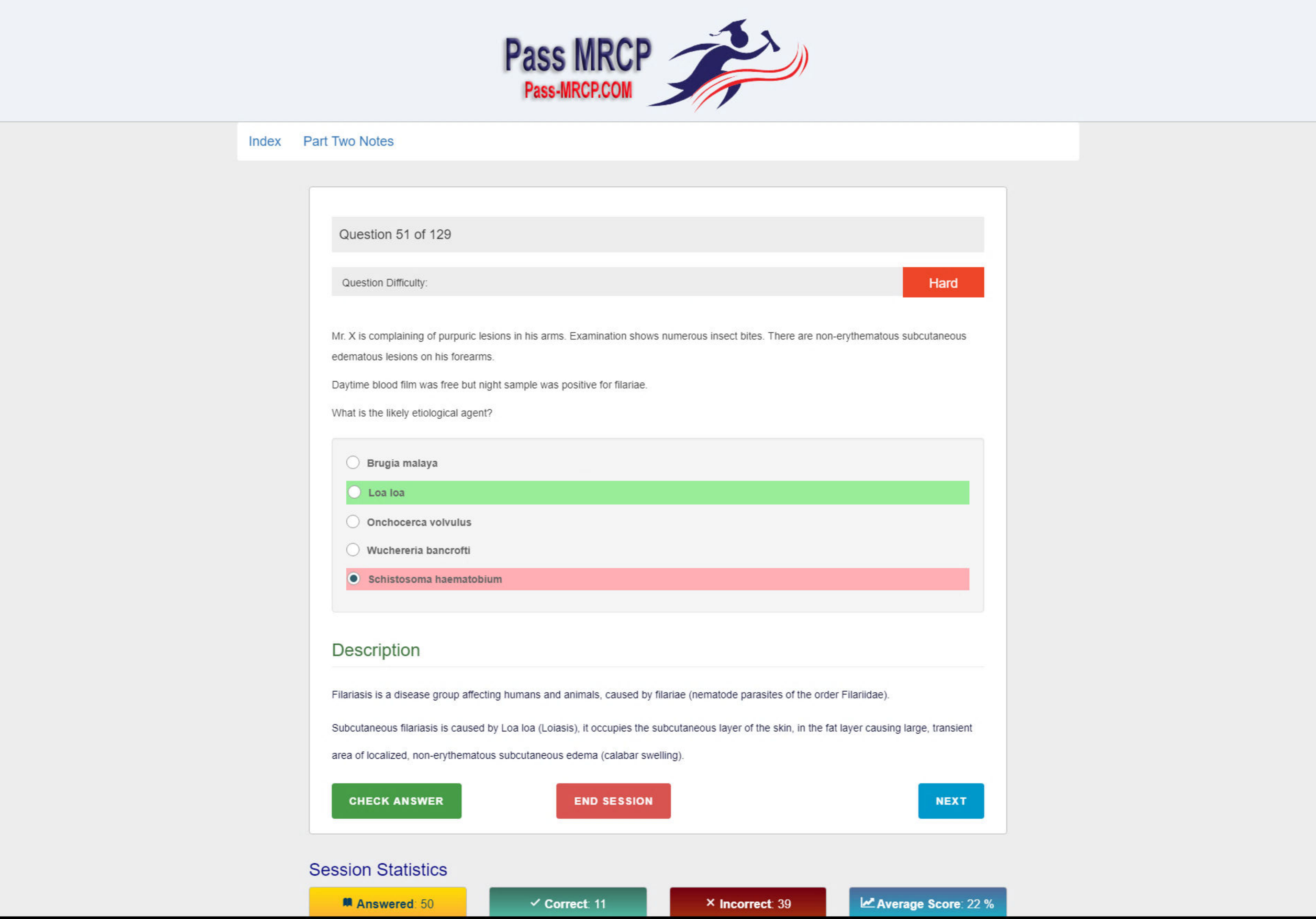
- ○ **Doxycycline**
- ○ **Prednisolone and albendazole**
- ○ **Metronidazole and furosemide**
- ● **Ciprofloxacin and carbamazepine**
- ○ **Mebendazole**

## Description

This patient is complaining of visceral larva migrans (VLM). It is caused by the migratory larvae of certain nematodes. It is spread to humans by ingestion of eggs in contaminated soil.

The larvae hatch in the small intestine, invade the mucosa, and enter the portal system causing hepatic granuloma. Some larvae proceed to the lungs and the circulatory system, where they can disseminate to virtually every organ.

Oral albendazole or mebendazole is the management of choice. Corticosteroids are indicated for systemic complications.



Question 51 of 129

Question Difficulty: Hard

Mr. X is complaining of purpuric lesions in his arms. Examination shows numerous insect bites. There are non-erythematous subcutaneous edematous lesions on his forearms.

Daytime blood film was free but night sample was positive for filariae.

What is the likely etiological agent?

- ○ **Brugia malaya**
- ○ **Loa loa**
- ○ **Onchocerca volvulus**
- ○ **Wuchereria bancrofti**
- ● **Schistosoma haematobium**

## Description

Filariasis is a disease group affecting humans and animals, caused by filariae (nematode parasites of the order Filariidae).

Subcutaneous filariasis is caused by Loa loa (Loiasis), it occupies the subcutaneous layer of the skin, in the fat layer causing large, transient area of localized, non-erythematous subcutaneous edema (calabar swelling).

Session Statistics

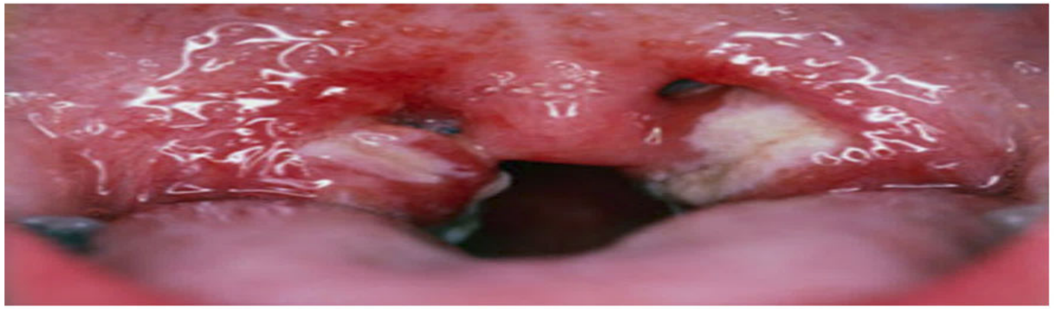
**Answered**: 50 **Correct**: 11 **Incorrect**: 39 **Average Score**: 22 %

Question 52 of 129

Question Difficulty: **Hard**

Mr. X is complaining is admitted to the ED due to dyspnea. He was just returned from a holiday in Eastern Europe and on return he complained of fever and sore throat.

Examination shows fever of 39 C. His mouth shows the lesion in the image. There is swollen neck with bilateral cervical lymphadenopathy. His right hand shows indolent, non-healing ulcers covered with a gray membrane.



Investigations show elevated cardiac enzymes and ECHO shows dilated and hypokinetic chambers.

What is the most likely diagnosis?

- ○ **Glandular fever**
- ○ **Cytomegalovirus infection**
- ○ **Streptococcal tonsillitis**
- ● **Infectious mononucleosis**
- ○ **Diphtheria**

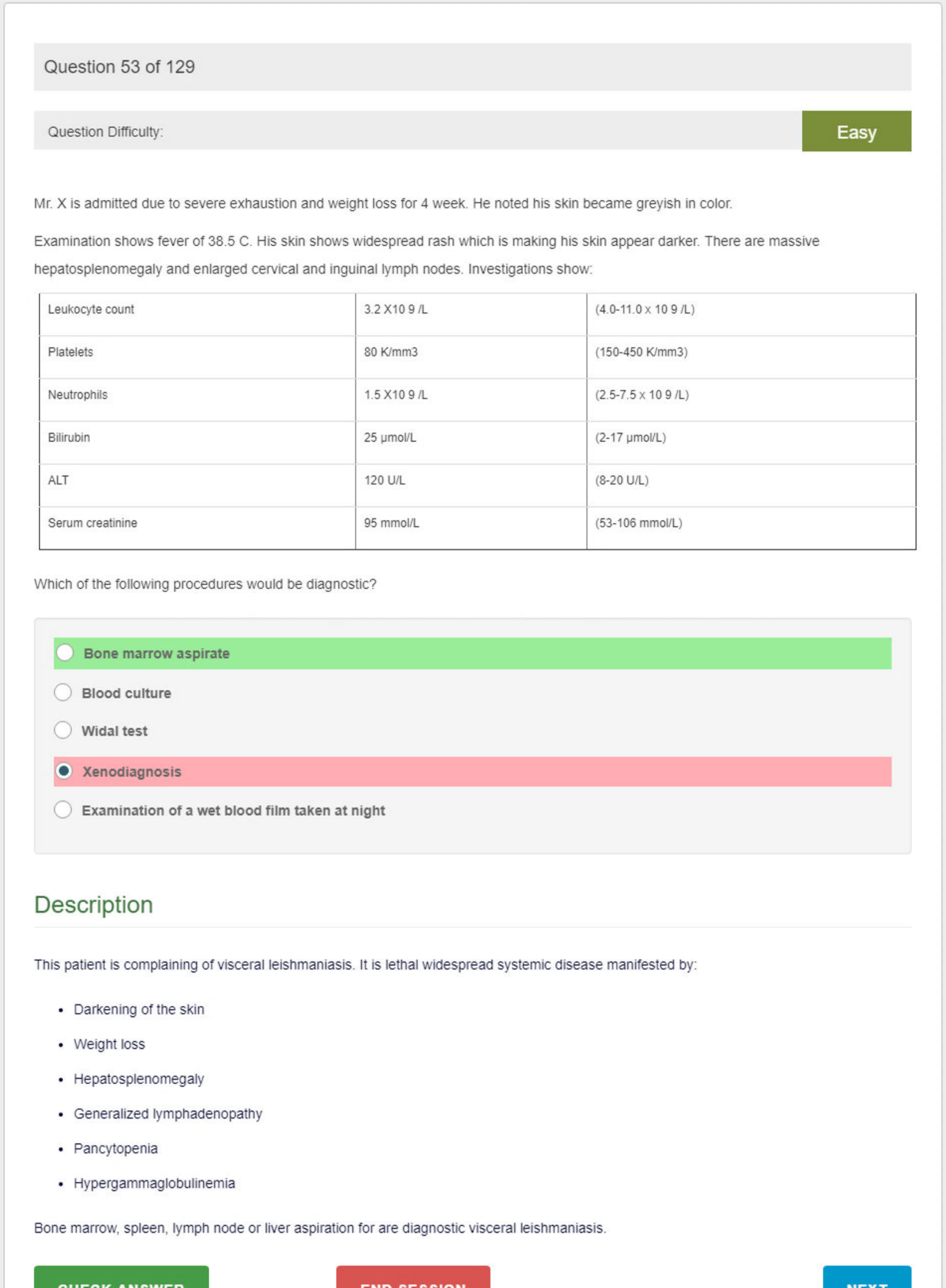
## Description

Corynebacterium diphtheriae is a gram positive, non-spore forming, and pleomorphic facultative anaerobe bacteria. It is manifested by:

- Sore throat and pharyngeal inflammation with pseudo-membrane ; removal of the membrane reveals a bleeding, edematous mucosa
- Cervical adenopathy causing "bull's neck"
- Indolent, non-healing cutaneous ulcers covered with a gray membrane
- Respiratory distress manifesting as stridor and wheezing

Investigations show myocarditis which is a complication of exotoxins.

CHECK ANSWER END SESSION NEXT



Question 53 of 129

Question Difficulty: **Easy**

Mr. X is admitted due to severe exhaustion and weight loss for 4 week. He noted his skin became greyish in color.

Examination shows fever of 38.5 C. His skin shows widespread rash which is making his skin appear darker. There are massive hepatosplenomegaly and enlarged cervical and inguinal lymph nodes. Investigations show:

| | | |
|---|---|---|
| Leukocyte count | 3.2 X10 9 /L | (4.0-11.0 x 10 9 /L) |
| Platelets | 80 K/mm3 | (150-450 K/mm3) |
| Neutrophils | 1.5 X10 9 /L | (2.5-7.5 x 10 9 /L) |
| Bilirubin | 25 µmol/L | (2-17 µmol/L) |
| ALT | 120 U/L | (8-20 U/L) |
| Serum creatinine | 95 mmol/L | (53-106 mmol/L) |

Which of the following procedures would be diagnostic?

○ **Bone marrow aspirate**

○ **Blood culture**

○ **Widal test**

● **Xenodiagnosis**

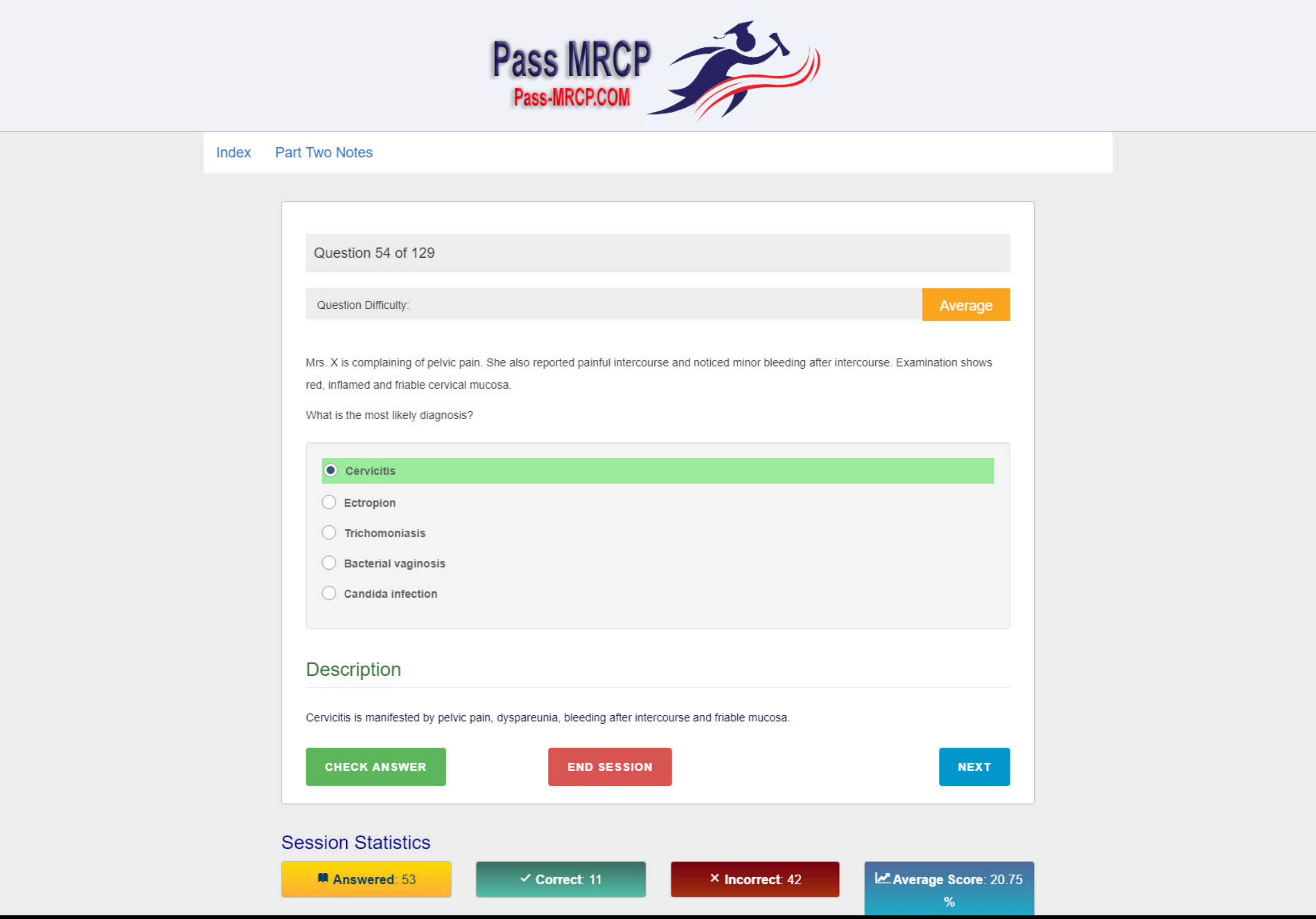
○ **Examination of a wet blood film taken at night**

## Description

This patient is complaining of visceral leishmaniasis. It is lethal widespread systemic disease manifested by:

- Darkening of the skin
- Weight loss
- Hepatosplenomegaly
- Generalized lymphadenopathy
- Pancytopenia
- Hypergammaglobulinemia

Bone marrow, spleen, lymph node or liver aspiration for are diagnostic visceral leishmaniasis.



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Question Difficulty: Average

Mrs. X is complaining of pelvic pain. She also reported painful intercourse and noticed minor bleeding after intercourse. Examination shows red, inflamed and friable cervical mucosa.

What is the most likely diagnosis?

- ● Cervicitis
- ○ Ectropion
- ○ Trichomoniasis
- ○ Bacterial vaginosis
- ○ Candida infection

## Description

Cervicitis is manifested by pelvic pain, dyspareunia, bleeding after intercourse and friable mucosa.

CHECK ANSWER
END SESSION
NEXT

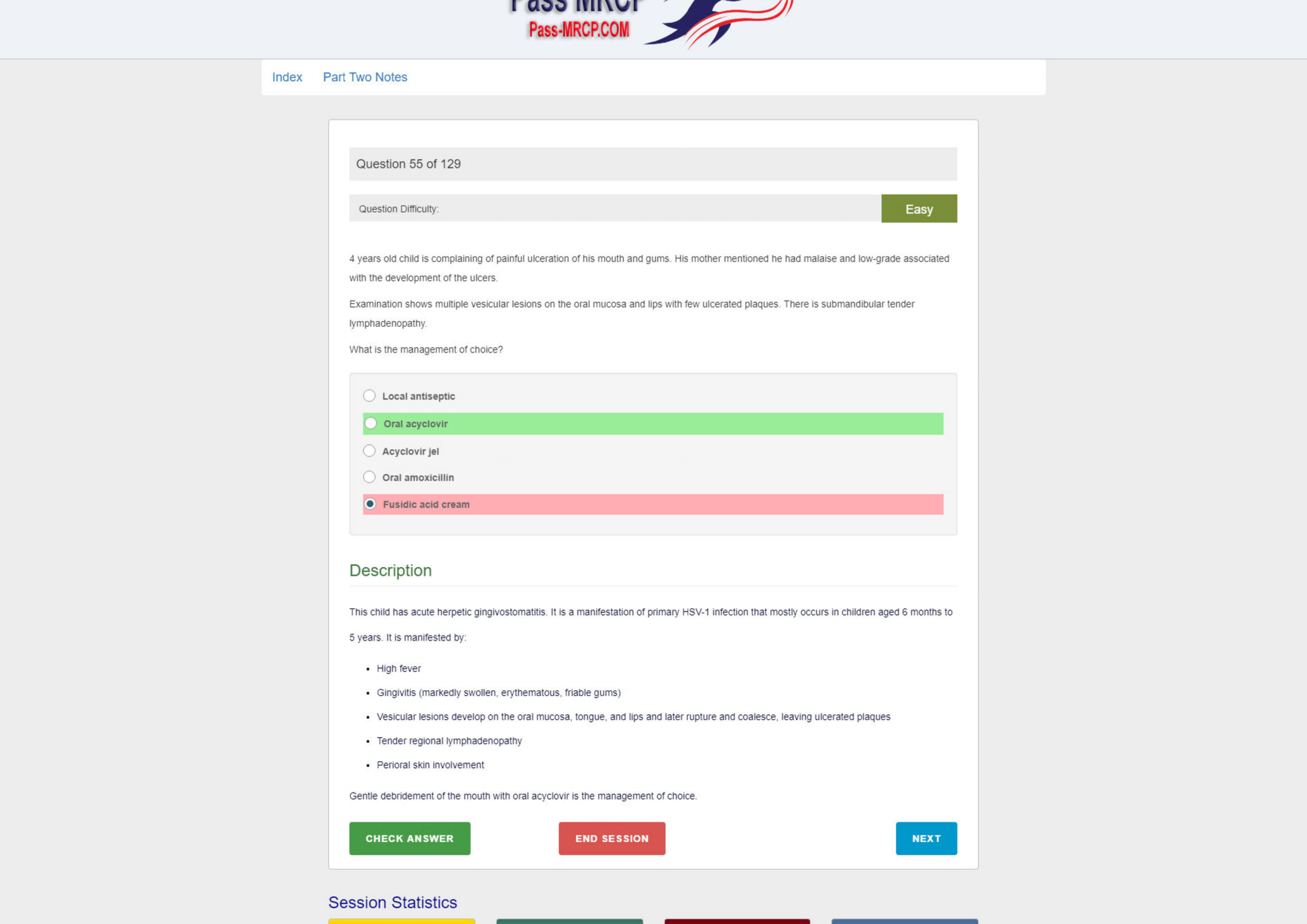
## Session Statistics

Answered: 53

✓ Correct: 11

× Incorrect: 42

Average Score: 20.75 %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Question Difficulty:
Easy
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4 years old child is complaining of painful ulceration of his mouth and gums. His mother mentioned he had malaise and low-grade associated with the development of the ulcers.

Examination shows multiple vesicular lesions on the oral mucosa and lips with few ulcerated plaques. There is submandibular tender lymphadenopathy.

What is the management of choice?

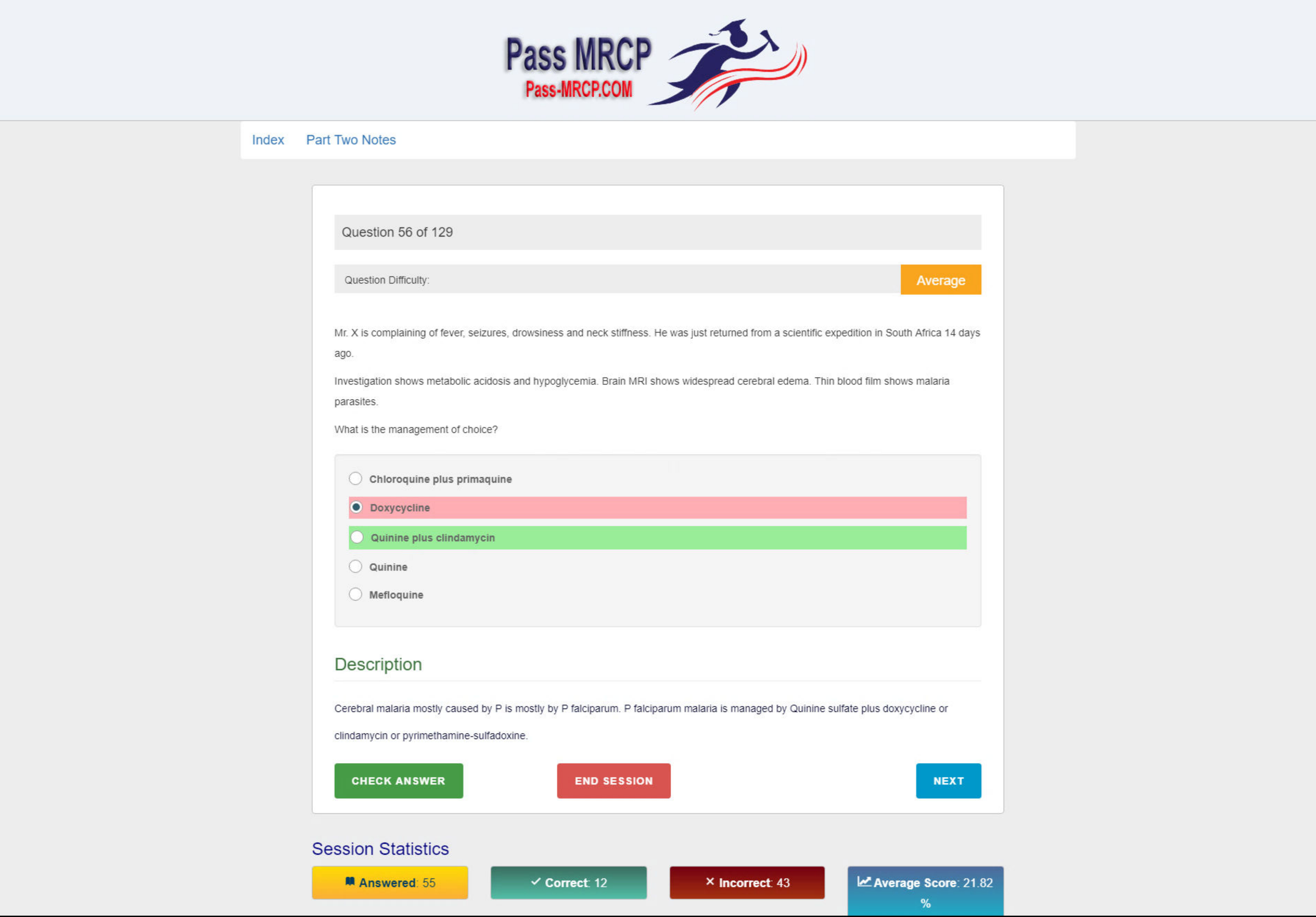
○ **Local antiseptic**
○ **Oral acyclovir**
○ **Acyclovir jel**
○ **Oral amoxicillin**
● **Fusidic acid cream**

## Description

This child has acute herpetic gingivostomatitis. It is a manifestation of primary HSV-1 infection that mostly occurs in children aged 6 months to 5 years. It is manifested by:

- High fever
- Gingivitis (markedly swollen, erythematous, friable gums)
- Vesicular lesions develop on the oral mucosa, tongue, and lips and later rupture and coalesce, leaving ulcerated plaques
- Tender regional lymphadenopathy
- Perioral skin involvement

Gentle debridement of the mouth with oral acyclovir is the management of choice.



Question 56 of 129

Question Difficulty: Average

Mr. X is complaining of fever, seizures, drowsiness and neck stiffness. He was just returned from a scientific expedition in South Africa 14 days ago.

Investigation shows metabolic acidosis and hypoglycemia. Brain MRI shows widespread cerebral edema. Thin blood film shows malaria parasites.

What is the management of choice?

- ○ Chloroquine plus primaquine
- ● Doxycycline
- ○ Quinine plus clindamycin
- ○ Quinine
- ○ Mefloquine

## Description

Cerebral malaria mostly caused by P is mostly by P falciparum. P falciparum malaria is managed by Quinine sulfate plus doxycycline or clindamycin or pyrimethamine-sulfadoxine.

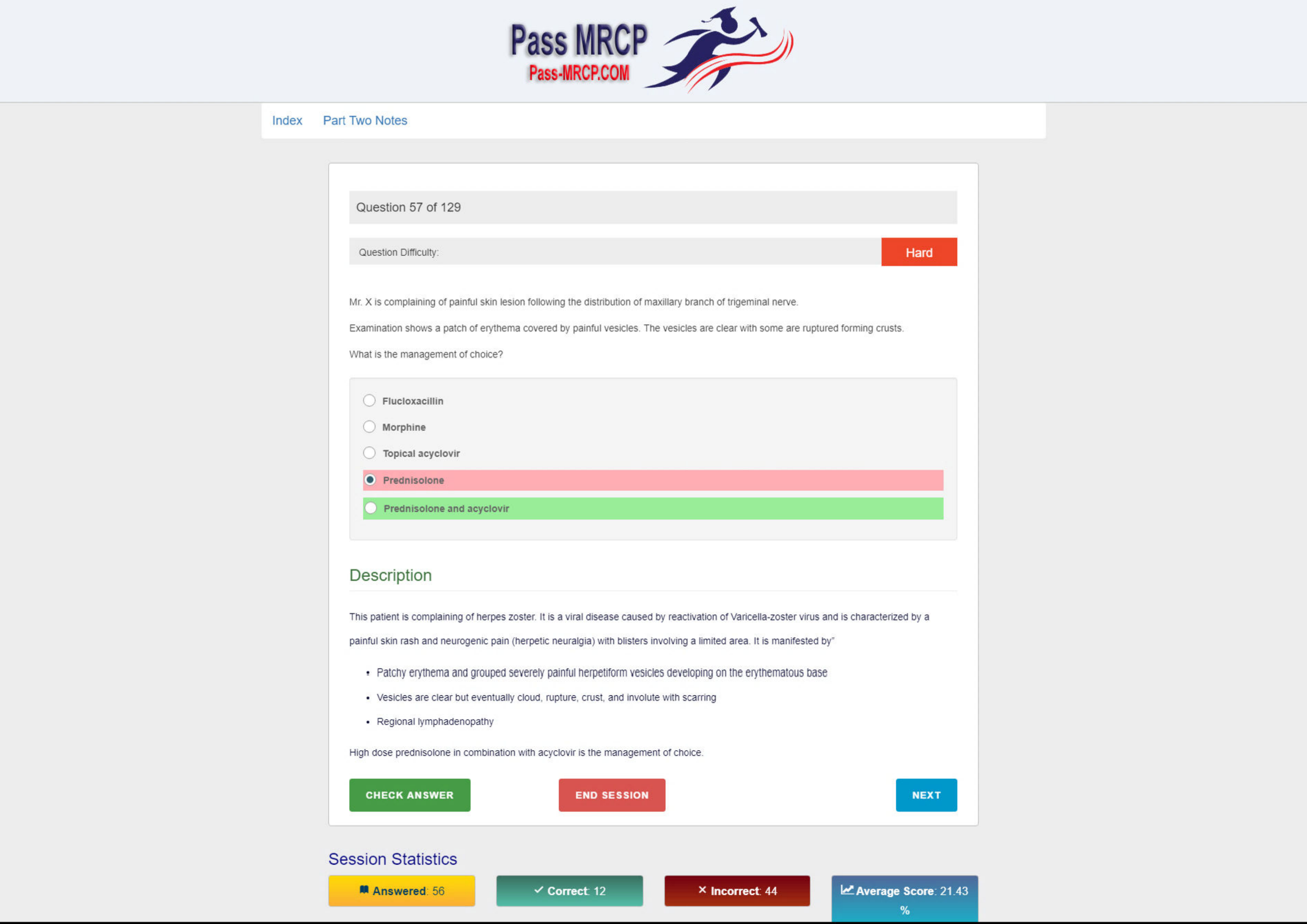
## Session Statistics

**Answered**: 55

✓ **Correct**: 12

✕ **Incorrect**: 43

**Average Score**: 21.82 %



Question 57 of 129

Question Difficulty: **Hard**

Mr. X is complaining of painful skin lesion following the distribution of maxillary branch of trigeminal nerve.

Examination shows a patch of erythema covered by painful vesicles. The vesicles are clear with some are ruptured forming crusts.

What is the management of choice?

○ **Flucloxacillin**
○ **Morphine**
○ **Topical acyclovir**
● **Prednisolone**
○ **Prednisolone and acyclovir**

## Description

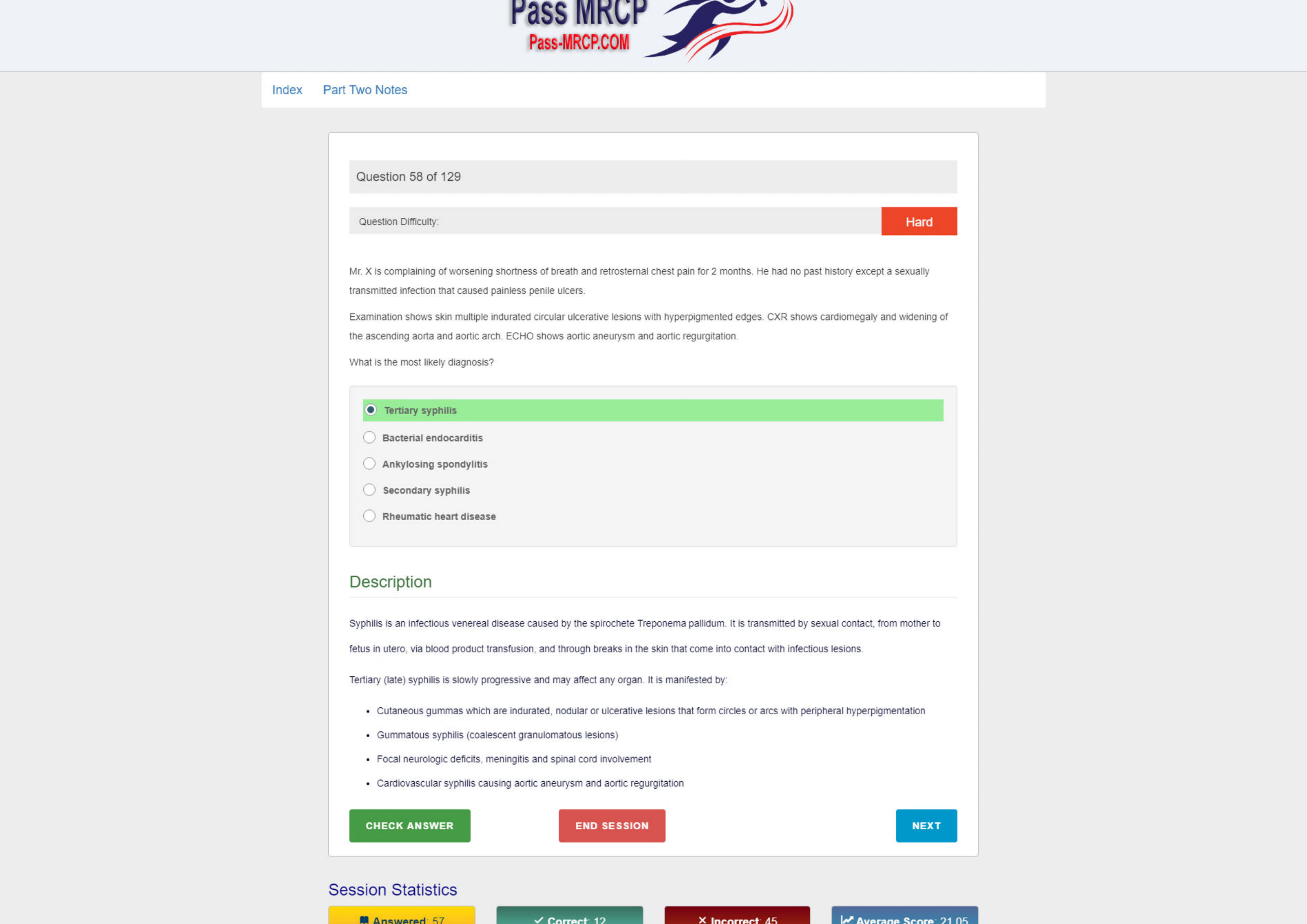
This patient is complaining of herpes zoster. It is a viral disease caused by reactivation of Varicella-zoster virus and is characterized by a painful skin rash and neurogenic pain (herpetic neuralgia) with blisters involving a limited area. It is manifested by"

- Patchy erythema and grouped severely painful herpetiform vesicles developing on the erythematous base
- Vesicles are clear but eventually cloud, rupture, crust, and involute with scarring
- Regional lymphadenopathy

High dose prednisolone in combination with acyclovir is the management of choice.

Session Statistics

Answered: 56
✓ Correct: 12
✕ Incorrect: 44
Average Score: 21.43 %



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Question Difficulty: Hard

Mr. X is complaining of worsening shortness of breath and retrosternal chest pain for 2 months. He had no past history except a sexually transmitted infection that caused painless penile ulcers.

Examination shows skin multiple indurated circular ulcerative lesions with hyperpigmented edges. CXR shows cardiomegaly and widening of the ascending aorta and aortic arch. ECHO shows aortic aneurysm and aortic regurgitation.

What is the most likely diagnosis?

● **Tertiary syphilis**
○ **Bacterial endocarditis**
○ **Ankylosing spondylitis**
○ **Secondary syphilis**
○ **Rheumatic heart disease**

## Description

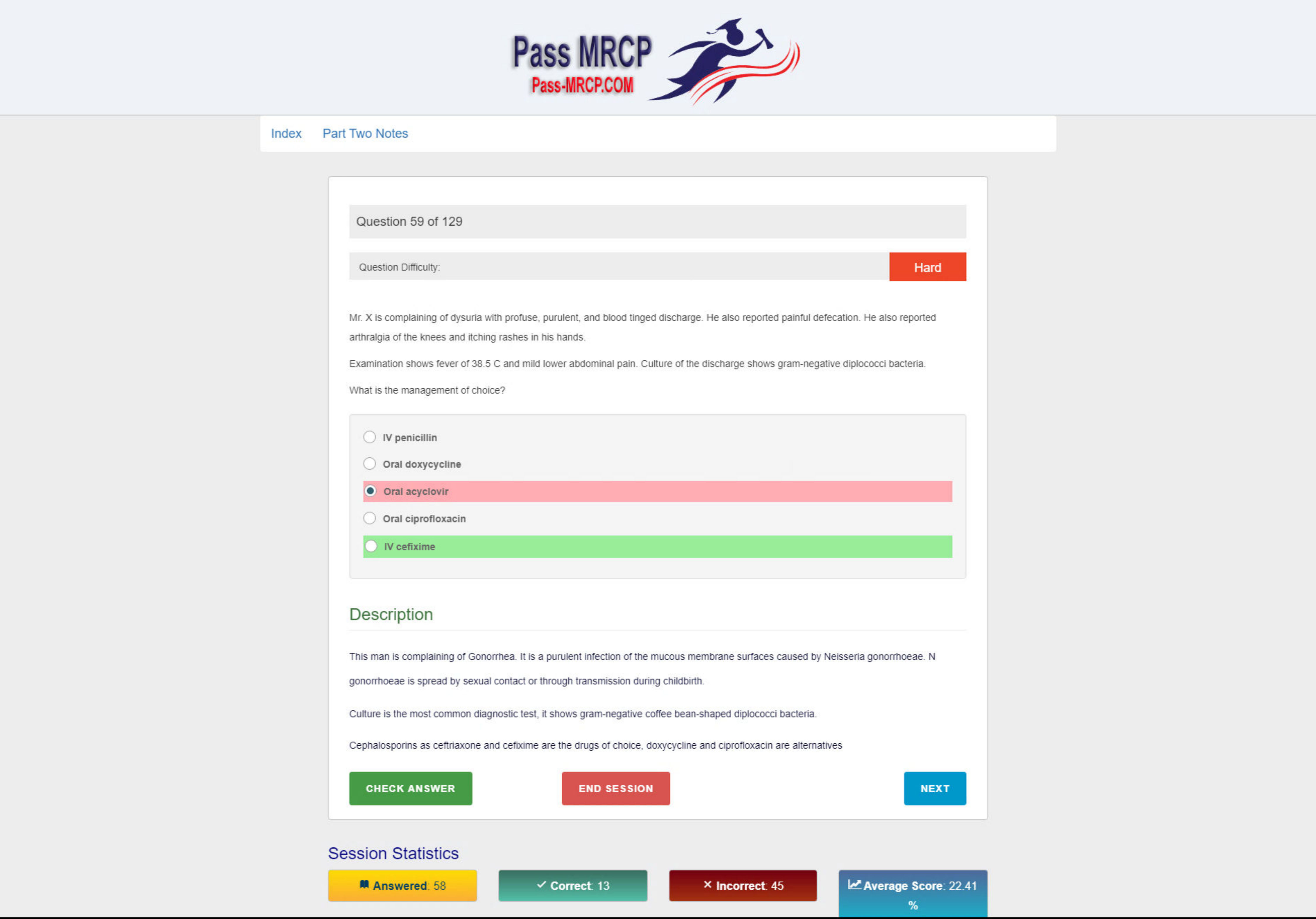
Syphilis is an infectious venereal disease caused by the spirochete Treponema pallidum. It is transmitted by sexual contact, from mother to fetus in utero, via blood product transfusion, and through breaks in the skin that come into contact with infectious lesions.

Tertiary (late) syphilis is slowly progressive and may affect any organ. It is manifested by:

- Cutaneous gummas which are indurated, nodular or ulcerative lesions that form circles or arcs with peripheral hyperpigmentation
- Gummatous syphilis (coalescent granulomatous lesions)
- Focal neurologic deficits, meningitis and spinal cord involvement
- Cardiovascular syphilis causing aortic aneurysm and aortic regurgitation

Session Statistics

Answered: 57
✓ Correct: 12
✕ Incorrect: 45
Average Score: 21.05



Question 59 of 129

Question Difficulty: Hard

Mr. X is complaining of dysuria with profuse, purulent, and blood tinged discharge. He also reported painful defecation. He also reported arthralgia of the knees and itching rashes in his hands.

Examination shows fever of 38.5 C and mild lower abdominal pain. Culture of the discharge shows gram-negative diplococci bacteria.

What is the management of choice?

- ○ **IV penicillin**
- ○ **Oral doxycycline**
- ● **Oral acyclovir**
- ○ **Oral ciprofloxacin**
- ○ **IV cefixime**

## Description

This man is complaining of Gonorrhea. It is a purulent infection of the mucous membrane surfaces caused by Neisseria gonorrhoeae. N gonorrhoeae is spread by sexual contact or through transmission during childbirth.

Culture is the most common diagnostic test, it shows gram-negative coffee bean-shaped diplococci bacteria.

Cephalosporins as ceftriaxone and cefixime are the drugs of choice, doxycycline and ciprofloxacin are alternatives

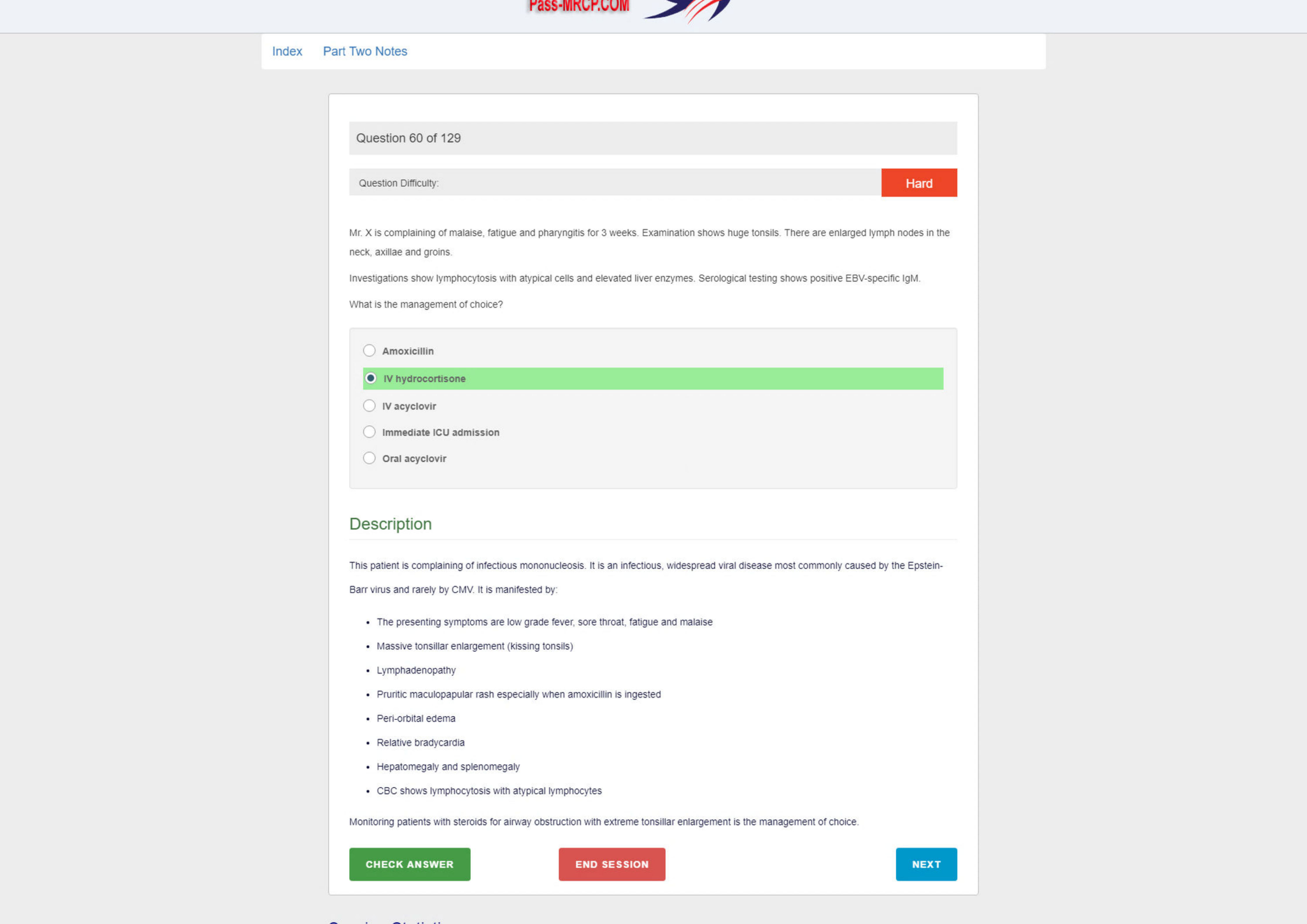
## Session Statistics

**Answered**: 58

✓ **Correct**: 13

✕ **Incorrect**: 45

**Average Score**: 22.41 %



Question 60 of 129

Question Difficulty: **Hard**

Mr. X is complaining of malaise, fatigue and pharyngitis for 3 weeks. Examination shows huge tonsils. There are enlarged lymph nodes in the neck, axillae and groins.

Investigations show lymphocytosis with atypical cells and elevated liver enzymes. Serological testing shows positive EBV-specific IgM.

What is the management of choice?

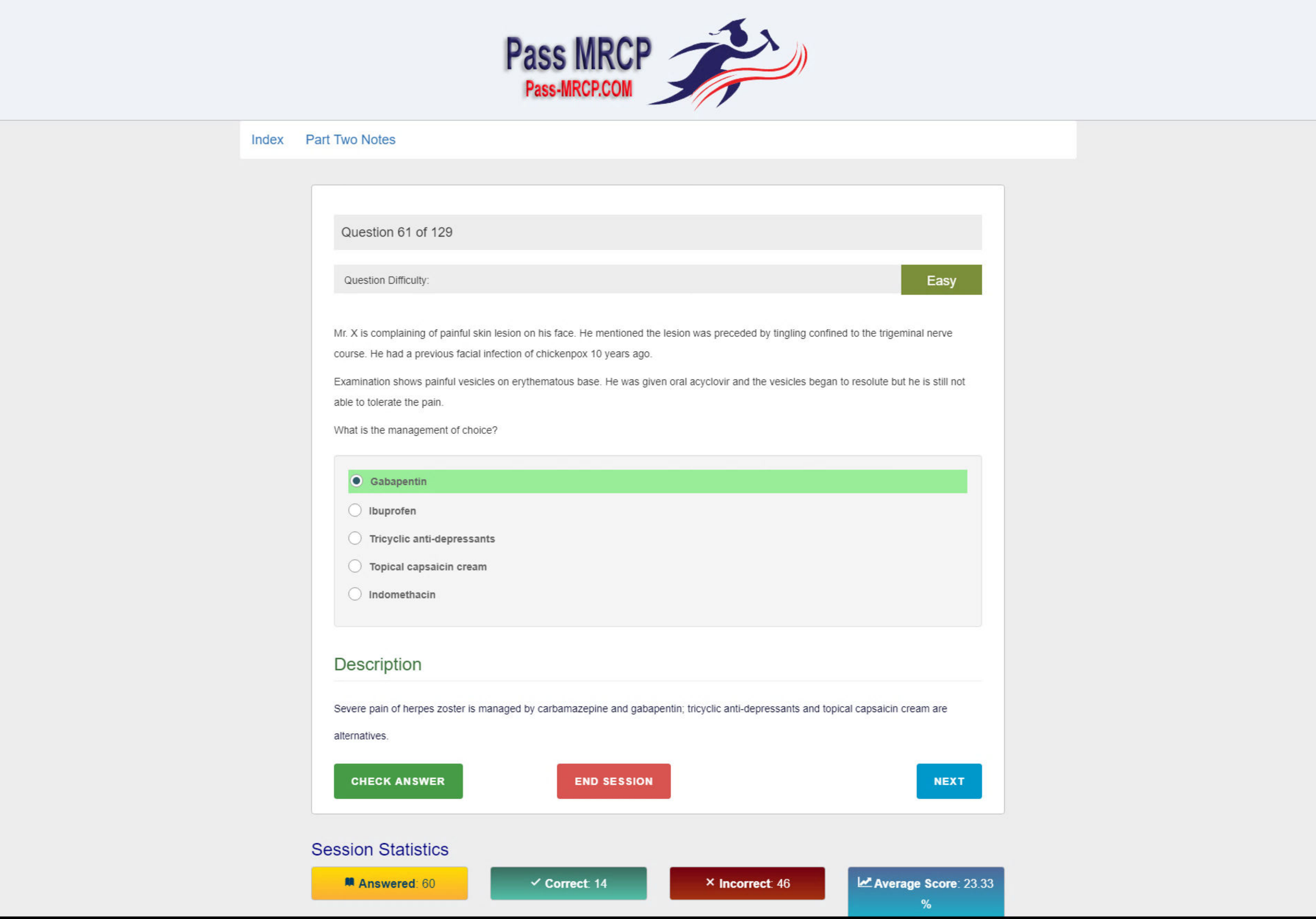
○ **Amoxicillin**
● **IV hydrocortisone**
○ **IV acyclovir**
○ **Immediate ICU admission**
○ **Oral acyclovir**

## Description

This patient is complaining of infectious mononucleosis. It is an infectious, widespread viral disease most commonly caused by the Epstein-Barr virus and rarely by CMV. It is manifested by:

- The presenting symptoms are low grade fever, sore throat, fatigue and malaise
- Massive tonsillar enlargement (kissing tonsils)
- Lymphadenopathy
- Pruritic maculopapular rash especially when amoxicillin is ingested
- Peri-orbital edema
- Relative bradycardia
- Hepatomegaly and splenomegaly
- CBC shows lymphocytosis with atypical lymphocytes

Monitoring patients with steroids for airway obstruction with extreme tonsillar enlargement is the management of choice.



Question 61 of 129

Question Difficulty: Easy

Mr. X is complaining of painful skin lesion on his face. He mentioned the lesion was preceded by tingling confined to the trigeminal nerve course. He had a previous facial infection of chickenpox 10 years ago.

Examination shows painful vesicles on erythematous base. He was given oral acyclovir and the vesicles began to resolute but he is still not able to tolerate the pain.

What is the management of choice?

- ● **Gabapentin**
- ○ **Ibuprofen**
- ○ **Tricyclic anti-depressants**
- ○ **Topical capsaicin cream**
- ○ **Indomethacin**

## Description

Severe pain of herpes zoster is managed by carbamazepine and gabapentin; tricyclic anti-depressants and topical capsaicin cream are alternatives.

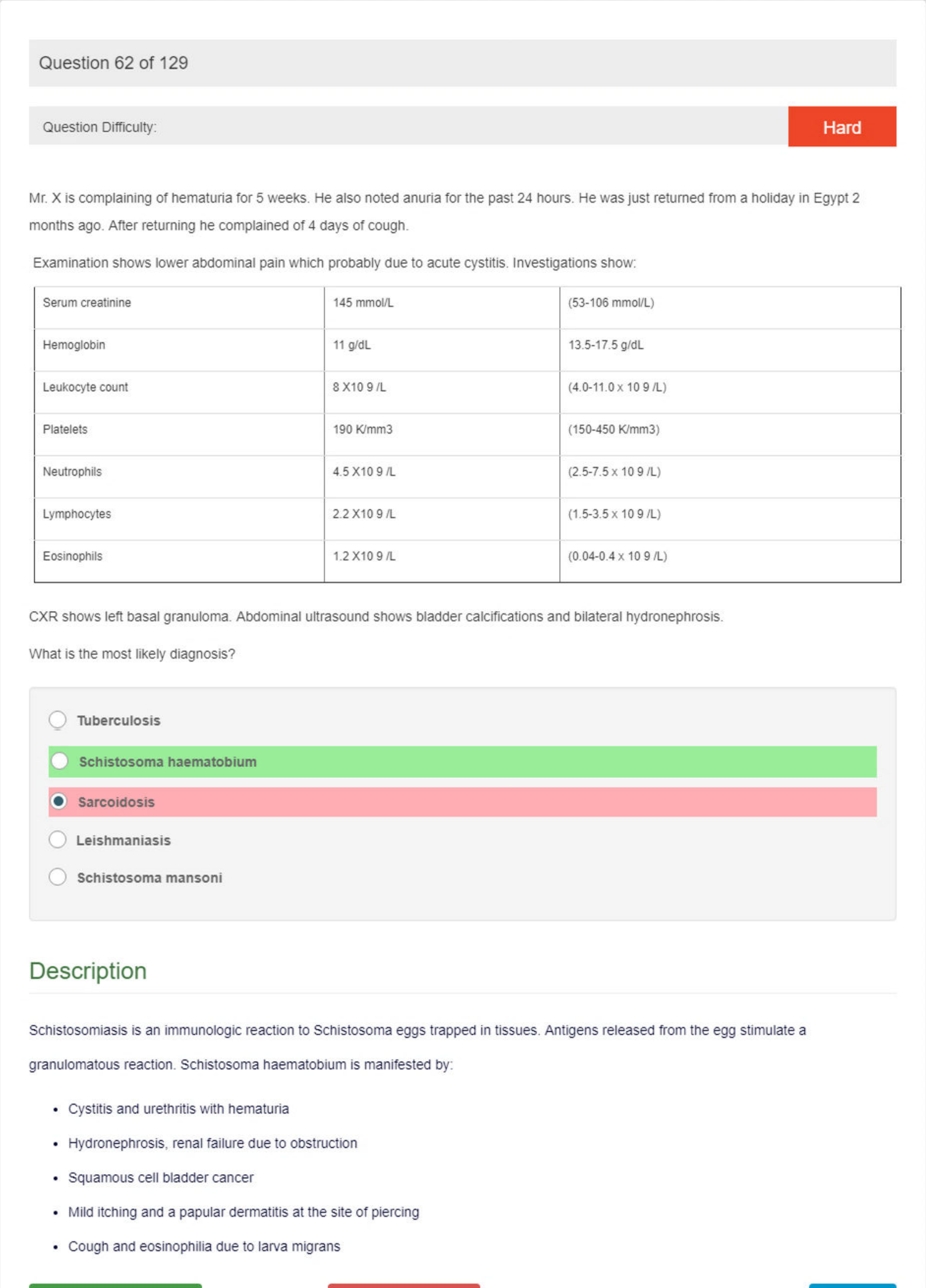
## Session Statistics

**Answered**: 60

✓ **Correct**: 14

✕ **Incorrect**: 46

**Average Score**: 23.33 %



Question 62 of 129

Question Difficulty: **Hard**

Mr. X is complaining of hematuria for 5 weeks. He also noted anuria for the past 24 hours. He was just returned from a holiday in Egypt 2 months ago. After returning he complained of 4 days of cough.

Examination shows lower abdominal pain which probably due to acute cystitis. Investigations show:

| | | |
|---|---|---|
| Serum creatinine | 145 mmol/L | (53-106 mmol/L) |
| Hemoglobin | 11 g/dL | 13.5-17.5 g/dL |
| Leukocyte count | 8 X10 9 /L | (4.0-11.0 x 10 9 /L) |
| Platelets | 190 K/mm3 | (150-450 K/mm3) |
| Neutrophils | 4.5 X10 9 /L | (2.5-7.5 x 10 9 /L) |
| Lymphocytes | 2.2 X10 9 /L | (1.5-3.5 x 10 9 /L) |
| Eosinophils | 1.2 X10 9 /L | (0.04-0.4 x 10 9 /L) |

CXR shows left basal granuloma. Abdominal ultrasound shows bladder calcifications and bilateral hydronephrosis.

What is the most likely diagnosis?

○ **Tuberculosis**

○ **Schistosoma haematobium**

● **Sarcoidosis**

○ **Leishmaniasis**

○ **Schistosoma mansoni**

## Description

Schistosomiasis is an immunologic reaction to Schistosoma eggs trapped in tissues. Antigens released from the egg stimulate a granulomatous reaction. Schistosoma haematobium is manifested by:

- Cystitis and urethritis with hematuria
- Hydronephrosis, renal failure due to obstruction
- Squamous cell bladder cancer
- Mild itching and a papular dermatitis at the site of piercing
- Cough and eosinophilia due to larva migrans

Question 63 of 129

Question Difficulty: **Average**

Mr. X is complaining of fever and sore throat for 2 weeks. He also reported abdominal heaviness for 1 month.

Examination shows fever of38 C, BP of 110/70 mmhg and heart rate of 55 per min. His mouth shows peri-orbital edema and huge tonsils. His abdomen shows hepatosplenomegaly. Investigations show:

| | | |
|---|---|---|
| Bilirubin | 52 µmol/L | (2-17 µmol/L) |
| ALT | 260 U/L | (8-20 U/L) |
| Serum creatinine | 88 mmol/L | (53-106 mmol/L) |
| Leukocyte count | 8 X10 9 /L | (4.0-11.0 x 10 9 /L) |
| Platelets | 180 K/mm3 | (150-450 K/mm3) |
| Neutrophils | 3 X10 9 /L | (2.5-7.5 x 10 9 /L) |
| Lymphocytes | 4 X10 9 /L | (1.5-3.5 x 10 9 /L) |
| Hemoglobin | 9 g/dL | 13.5-17.5 g/dL |

Blood film shows atypical lymphocytes.

What is the most likely causative organism?

| | | |
|---|---|---|
| Platelets | 180 K/mm3 | (150-450 K/mm3) |
| Neutrophils | 3 X10 9 /L | (2.5-7.5 x 10 9 /L) |
| Lymphocytes | 4 X10 9 /L | (1.5-3.5 x 10 9 /L) |
| Hemoglobin | 9 g/dL | 13.5-17.5 g/dL |

Blood film shows atypical lymphocytes.

What is the most likely causative organism?

○ **Streptococcus infection**
○ **Epstein-Barr virus**
○ **Toxoplasmosis**
● **Diphtheria**
○ **CMV**

## Description

Infectious mononucleosis is an infectious, widespread viral disease most commonly caused by the Epstein-Barr virus and rarely by CMV. It is manifested by:

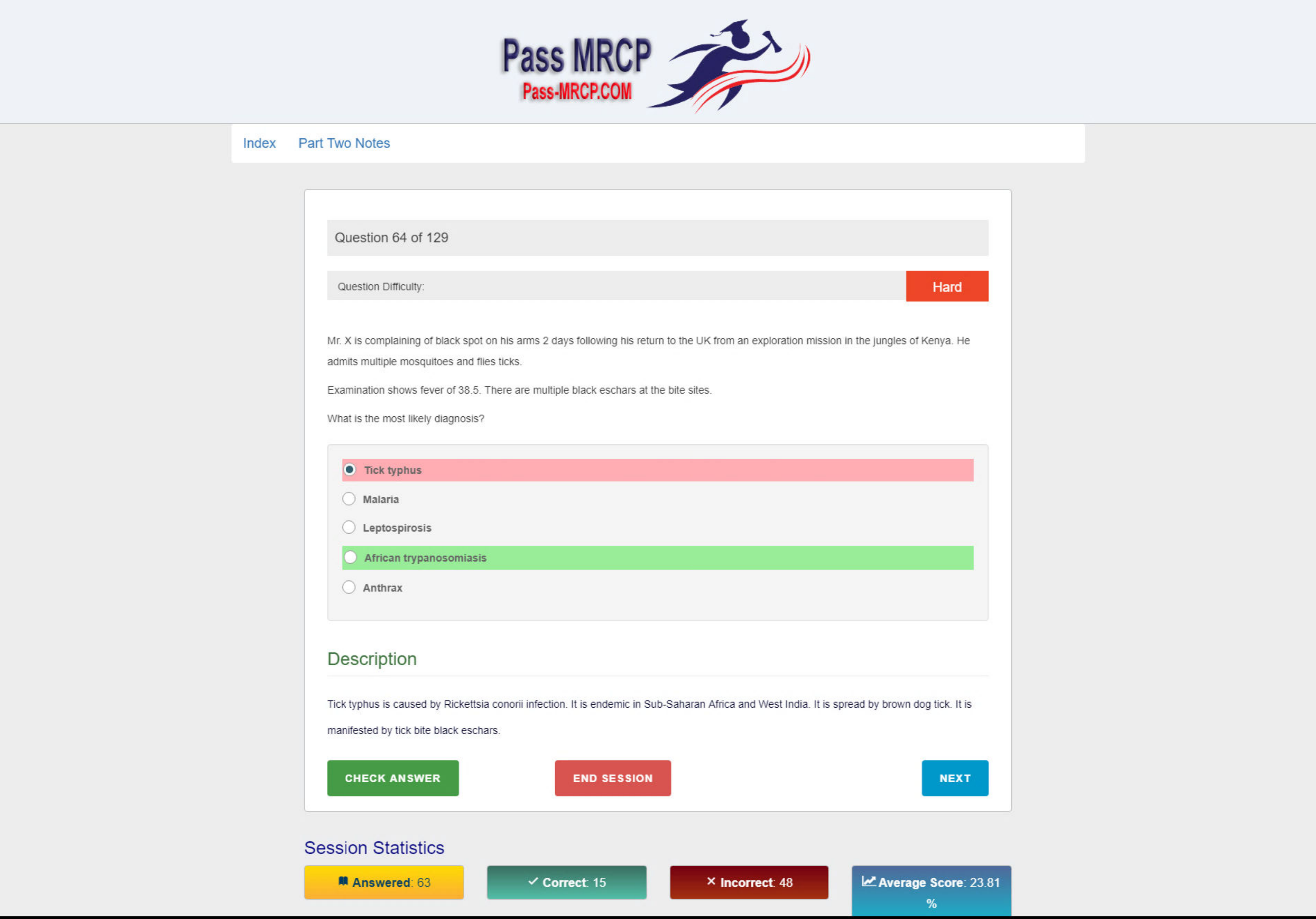
The presenting symptoms are low grade fever, sore throat, fatigue and malaise

- Massive tonsillar enlargement (kissing tonsils)
- Lymphadenopathy
- Pruritic maculopapular rash especially when amoxicillin is ingested
- Peri-orbital edema
- Relative bradycardia
- Hepatomegaly and splenomegaly
- CBC shows lymphocytosis with atypical lymphocytes

CHECK ANSWER END SESSION NEXT

## Session Statistics

**Answered**: 62 | ✓ **Correct**: 15 | ✕ **Incorrect**: 47 | **Average Score**: 24.19 %



Question 64 of 129

Question Difficulty: Hard

Mr. X is complaining of black spot on his arms 2 days following his return to the UK from an exploration mission in the jungles of Kenya. He admits multiple mosquitoes and flies ticks.

Examination shows fever of 38.5. There are multiple black eschars at the bite sites.

What is the most likely diagnosis?

- ● Tick typhus
- ○ Malaria
- ○ Leptospirosis
- ○ African trypanosomiasis
- ○ Anthrax

## Description

Tick typhus is caused by Rickettsia conorii infection. It is endemic in Sub-Saharan Africa and West India. It is spread by brown dog tick. It is manifested by tick bite black eschars.

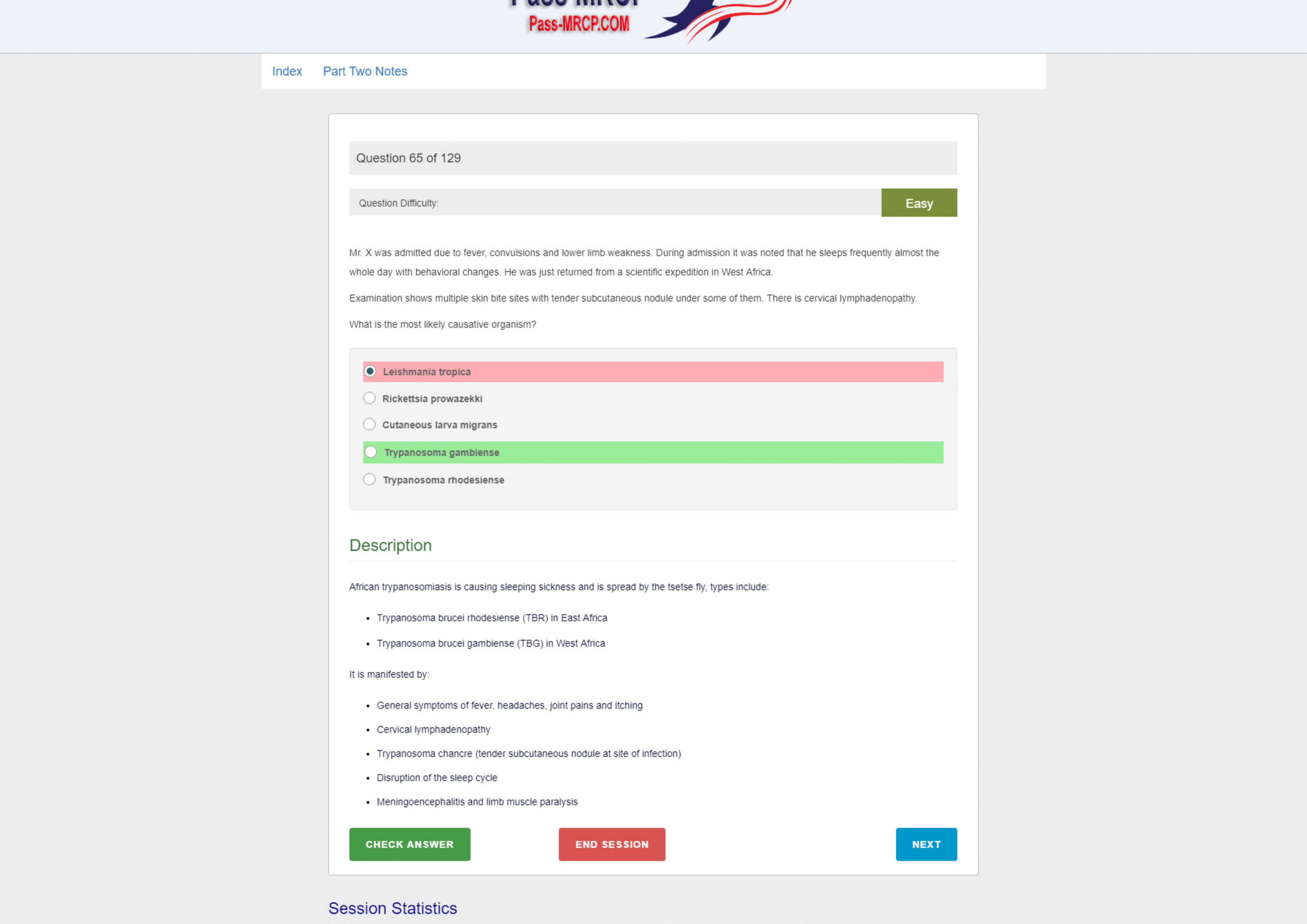
## Session Statistics

Answered: 63

✓ Correct: 15

✕ Incorrect: 48

Average Score: 23.81 %



Question 65 of 129

Question Difficulty: Easy

Mr. X was admitted due to fever, convulsions and lower limb weakness. During admission it was noted that he sleeps frequently almost the whole day with behavioral changes. He was just returned from a scientific expedition in West Africa.

Examination shows multiple skin bite sites with tender subcutaneous nodule under some of them. There is cervical lymphadenopathy.

What is the most likely causative organism?

- ● **Leishmania tropica**
- ○ **Rickettsia prowazekki**
- ○ **Cutaneous larva migrans**
- ○ **Trypanosoma gambiense**
- ○ **Trypanosoma rhodesiense**

## Description

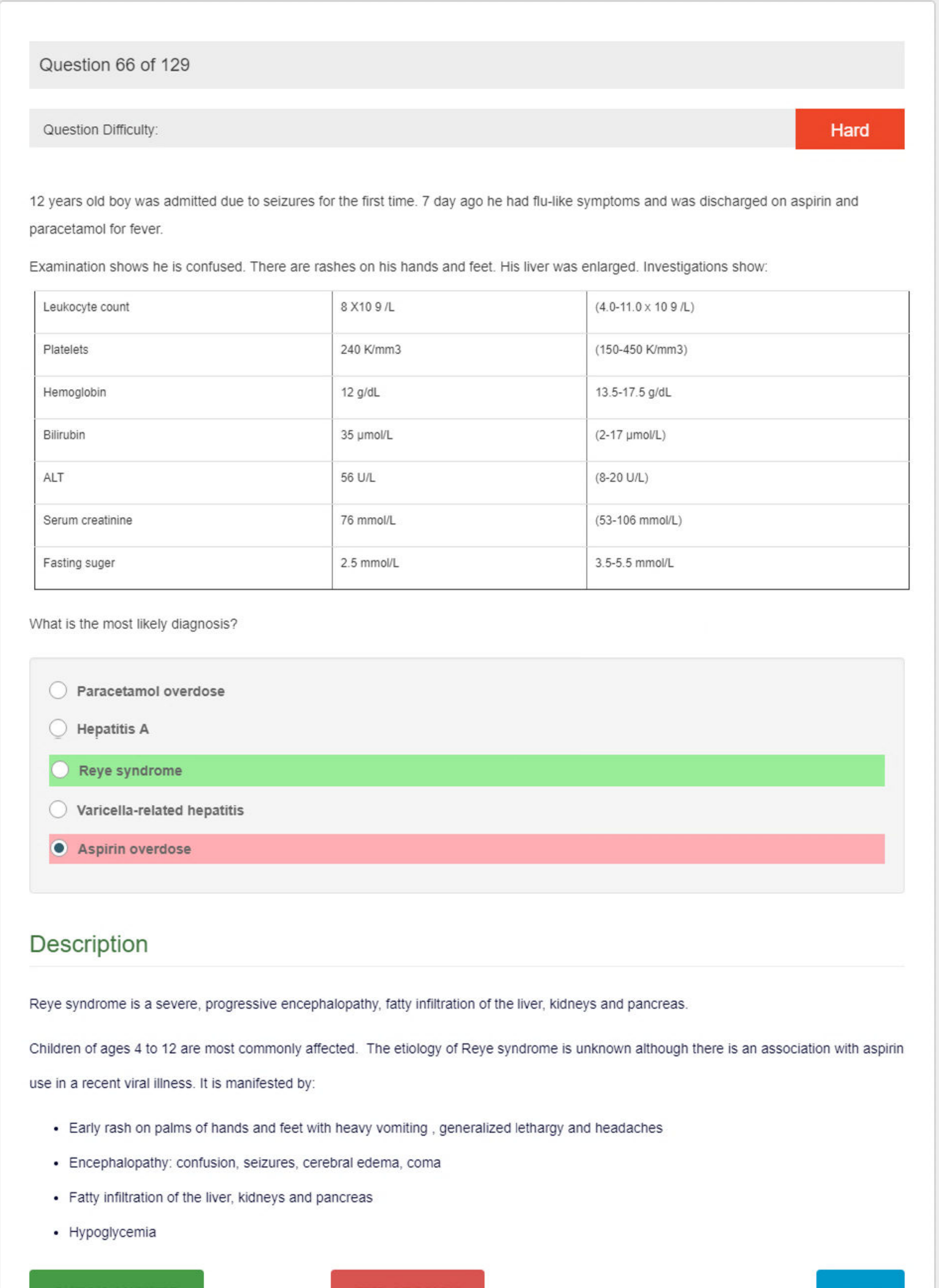
African trypanosomiasis is causing sleeping sickness and is spread by the tsetse fly, types include:

- Trypanosoma brucei rhodesiense (TBR) in East Africa
- Trypanosoma brucei gambiense (TBG) in West Africa

It is manifested by:

- General symptoms of fever, headaches, joint pains and itching
- Cervical lymphadenopathy
- Trypanosoma chancre (tender subcutaneous nodule at site of infection)
- Disruption of the sleep cycle
- Meningoencephalitis and limb muscle paralysis

Session Statistics



Question 66 of 129

Question Difficulty: **Hard**

12 years old boy was admitted due to seizures for the first time. 7 day ago he had flu-like symptoms and was discharged on aspirin and paracetamol for fever.

Examination shows he is confused. There are rashes on his hands and feet. His liver was enlarged. Investigations show:

| | | |
|---|---|---|
| Leukocyte count | 8 X10 9 /L | (4.0-11.0 x 10 9 /L) |
| Platelets | 240 K/mm3 | (150-450 K/mm3) |
| Hemoglobin | 12 g/dL | 13.5-17.5 g/dL |
| Bilirubin | 35 µmol/L | (2-17 µmol/L) |
| ALT | 56 U/L | (8-20 U/L) |
| Serum creatinine | 76 mmol/L | (53-106 mmol/L) |
| Fasting suger | 2.5 mmol/L | 3.5-5.5 mmol/L |

What is the most likely diagnosis?

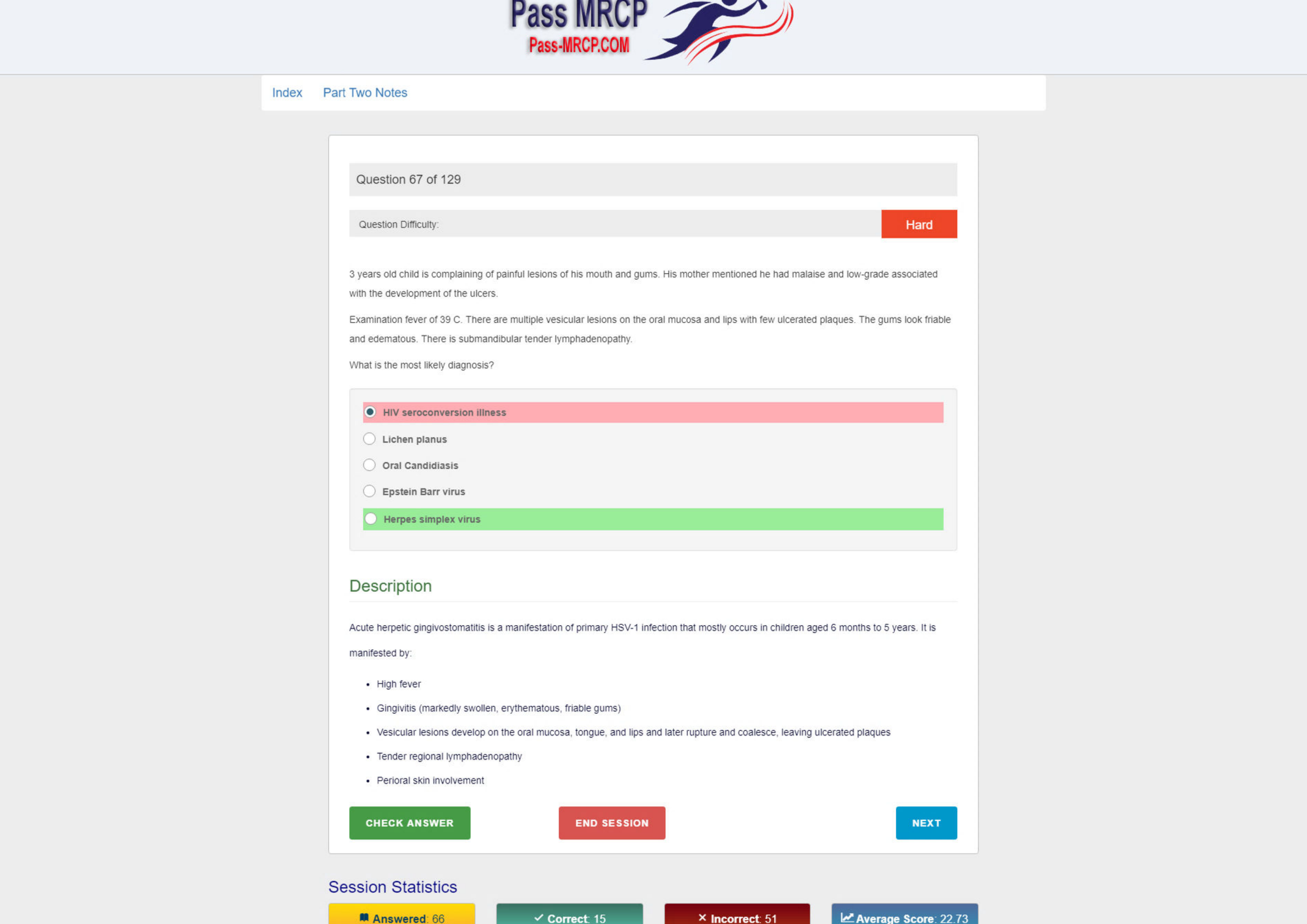
○ **Paracetamol overdose**
○ **Hepatitis A**
○ **Reye syndrome**
○ **Varicella-related hepatitis**
● **Aspirin overdose**

## Description

Reye syndrome is a severe, progressive encephalopathy, fatty infiltration of the liver, kidneys and pancreas.

Children of ages 4 to 12 are most commonly affected. The etiology of Reye syndrome is unknown although there is an association with aspirin use in a recent viral illness. It is manifested by:

- Early rash on palms of hands and feet with heavy vomiting , generalized lethargy and headaches
- Encephalopathy: confusion, seizures, cerebral edema, coma
- Fatty infiltration of the liver, kidneys and pancreas
- Hypoglycemia



Question 67 of 129

Question Difficulty: Hard

3 years old child is complaining of painful lesions of his mouth and gums. His mother mentioned he had malaise and low-grade associated with the development of the ulcers.

Examination fever of 39 C. There are multiple vesicular lesions on the oral mucosa and lips with few ulcerated plaques. The gums look friable and edematous. There is submandibular tender lymphadenopathy.

What is the most likely diagnosis?

● HIV seroconversion illness
○ Lichen planus
○ Oral Candidiasis
○ Epstein Barr virus
○ Herpes simplex virus

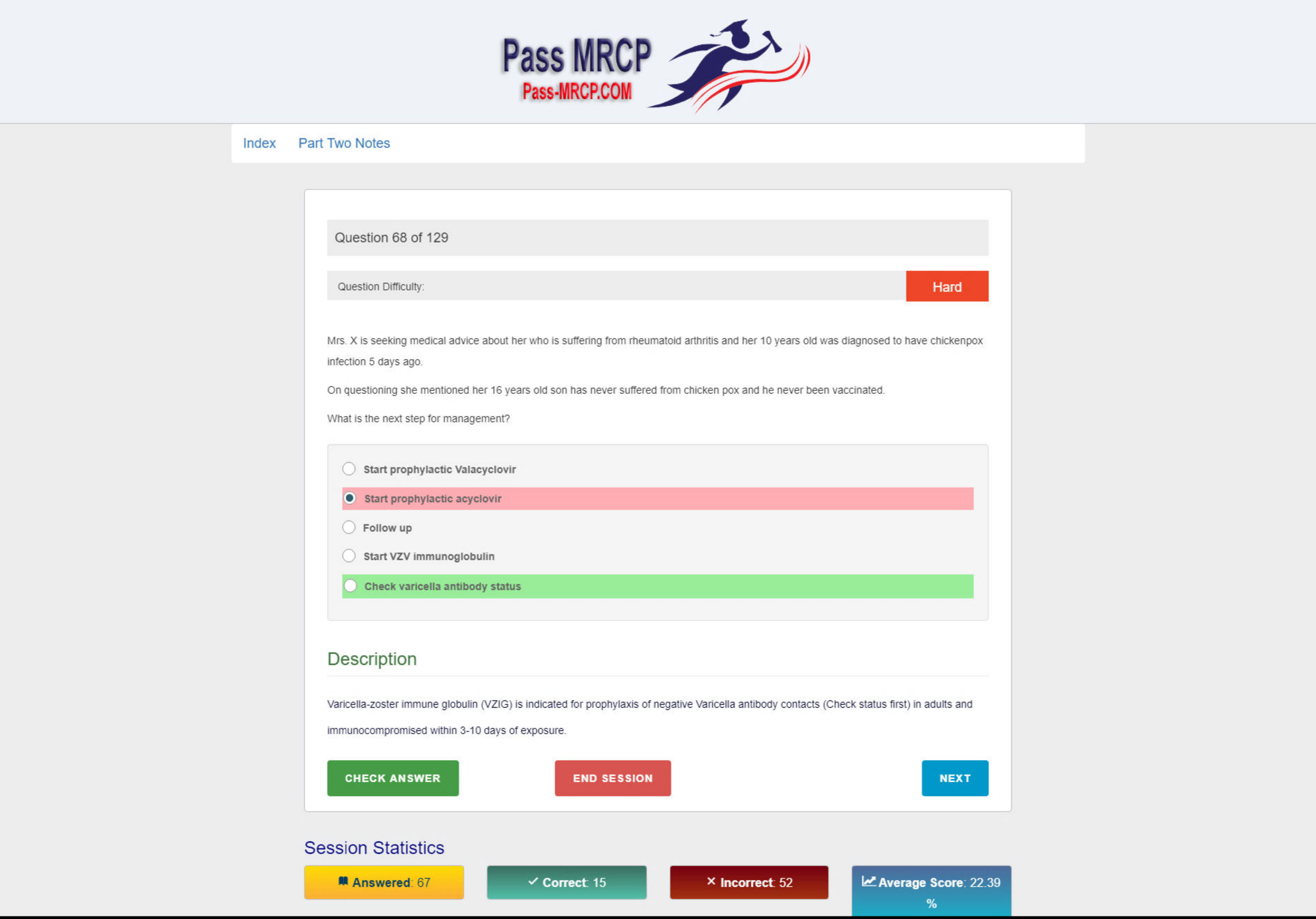
## Description

Acute herpetic gingivostomatitis is a manifestation of primary HSV-1 infection that mostly occurs in children aged 6 months to 5 years. It is manifested by:

- High fever
- Gingivitis (markedly swollen, erythematous, friable gums)
- Vesicular lesions develop on the oral mucosa, tongue, and lips and later rupture and coalesce, leaving ulcerated plaques
- Tender regional lymphadenopathy
- Perioral skin involvement

## Session Statistics

Answered: 66
✓ Correct: 15
✕ Incorrect: 51
Average Score: 22.73



Question 68 of 129

Question Difficulty: **Hard**

Mrs. X is seeking medical advice about her who is suffering from rheumatoid arthritis and her 10 years old was diagnosed to have chickenpox infection 5 days ago.

On questioning she mentioned her 16 years old son has never suffered from chicken pox and he never been vaccinated.

What is the next step for management?

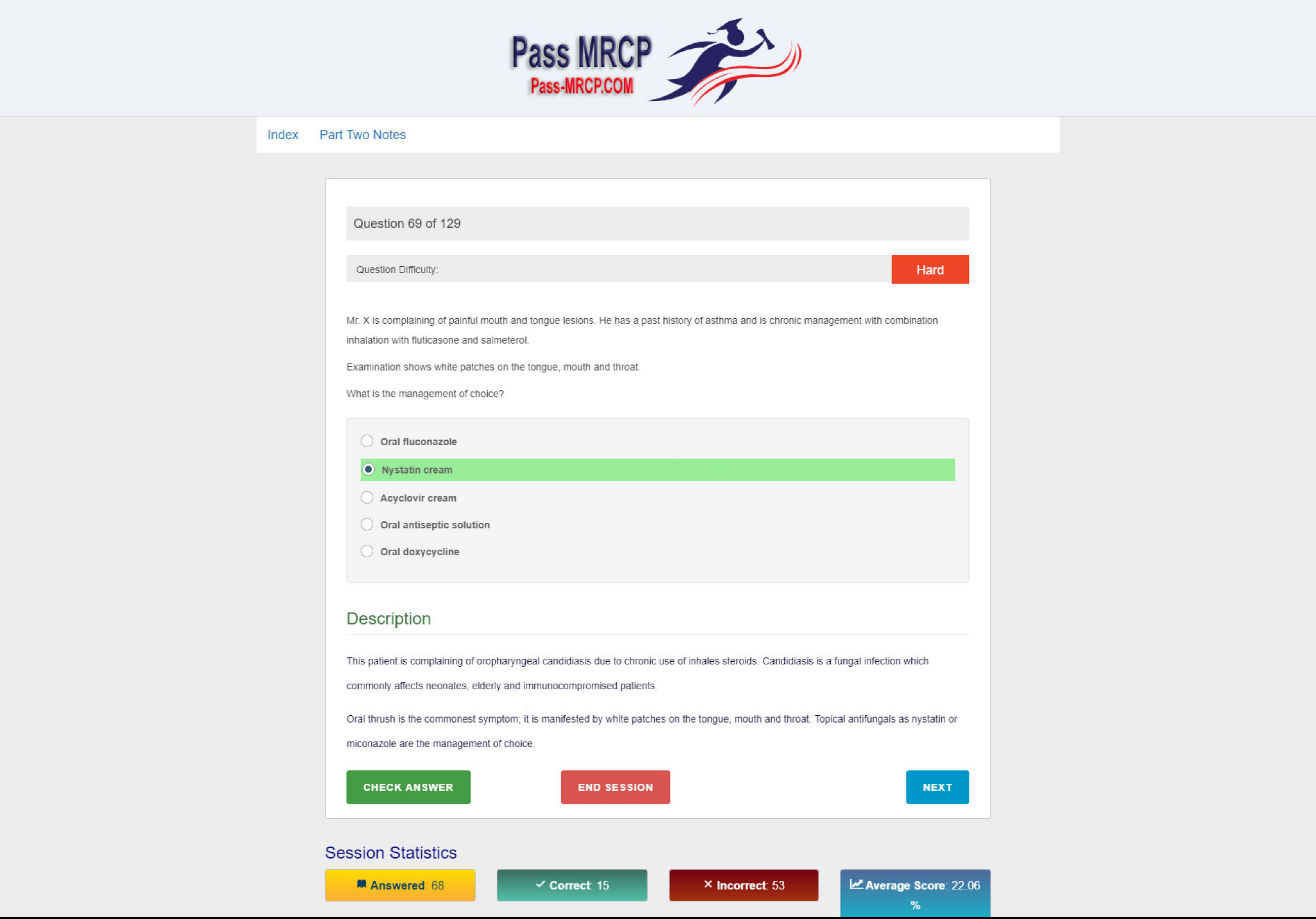
- ○ **Start prophylactic Valacyclovir**
- ● **Start prophylactic acyclovir**
- ○ **Follow up**
- ○ **Start VZV immunoglobulin**
- ○ **Check varicella antibody status**

## Description

Varicella-zoster immune globulin (VZIG) is indicated for prophylaxis of negative Varicella antibody contacts (Check status first) in adults and immunocompromised within 3-10 days of exposure.

## Session Statistics

**Answered**: 67
✓ **Correct**: 15
× **Incorrect**: 52
**Average Score**: 22.39 %



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Question Difficulty: **Hard**

Mr. X is complaining of painful mouth and tongue lesions. He has a past history of asthma and is chronic management with combination inhalation with fluticasone and salmeterol.

Examination shows white patches on the tongue, mouth and throat.

What is the management of choice?

- ○ **Oral fluconazole**
- ● **Nystatin cream**
- ○ **Acyclovir cream**
- ○ **Oral antiseptic solution**
- ○ **Oral doxycycline**

## Description

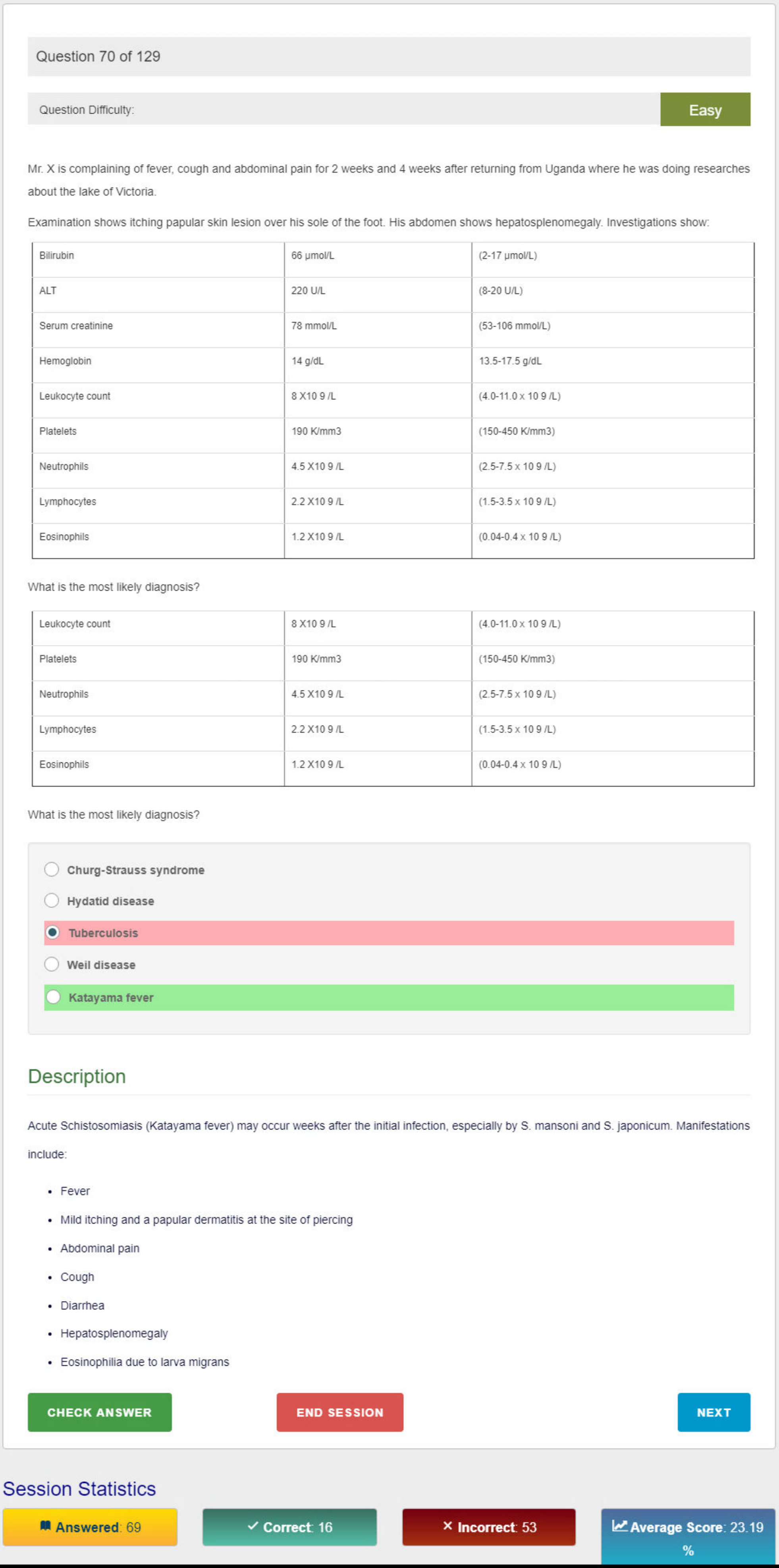
This patient is complaining of oropharyngeal candidiasis due to chronic use of inhales steroids. Candidiasis is a fungal infection which commonly affects neonates, elderly and immunocompromised patients.

Oral thrush is the commonest symptom; it is manifested by white patches on the tongue, mouth and throat. Topical antifungals as nystatin or miconazole are the management of choice.

CHECK ANSWER    END SESSION    NEXT

## Session Statistics

**Answered**: 68
✓ **Correct**: 15
✕ **Incorrect**: 53
**Average Score**: 22.06 %



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Question Difficulty: **Easy**

Mr. X is complaining of fever, cough and abdominal pain for 2 weeks and 4 weeks after returning from Uganda where he was doing researches about the lake of Victoria.

Examination shows itching papular skin lesion over his sole of the foot. His abdomen shows hepatosplenomegaly. Investigations show:

| | | |
|---|---|---|
| Bilirubin | 66 µmol/L | (2-17 µmol/L) |
| ALT | 220 U/L | (8-20 U/L) |
| Serum creatinine | 78 mmol/L | (53-106 mmol/L) |
| Hemoglobin | 14 g/dL | 13.5-17.5 g/dL |
| Leukocyte count | 8 X10 9 /L | (4.0-11.0 x 10 9 /L) |
| Platelets | 190 K/mm3 | (150-450 K/mm3) |
| Neutrophils | 4.5 X10 9 /L | (2.5-7.5 x 10 9 /L) |
| Lymphocytes | 2.2 X10 9 /L | (1.5-3.5 x 10 9 /L) |
| Eosinophils | 1.2 X10 9 /L | (0.04-0.4 x 10 9 /L) |

What is the most likely diagnosis?

| | | |
|---|---|---|
| Leukocyte count | 8 X10 9 /L | (4.0-11.0 x 10 9 /L) |
| Platelets | 190 K/mm3 | (150-450 K/mm3) |
| Neutrophils | 4.5 X10 9 /L | (2.5-7.5 x 10 9 /L) |
| Lymphocytes | 2.2 X10 9 /L | (1.5-3.5 x 10 9 /L) |
| Eosinophils | 1.2 X10 9 /L | (0.04-0.4 x 10 9 /L) |

What is the most likely diagnosis?

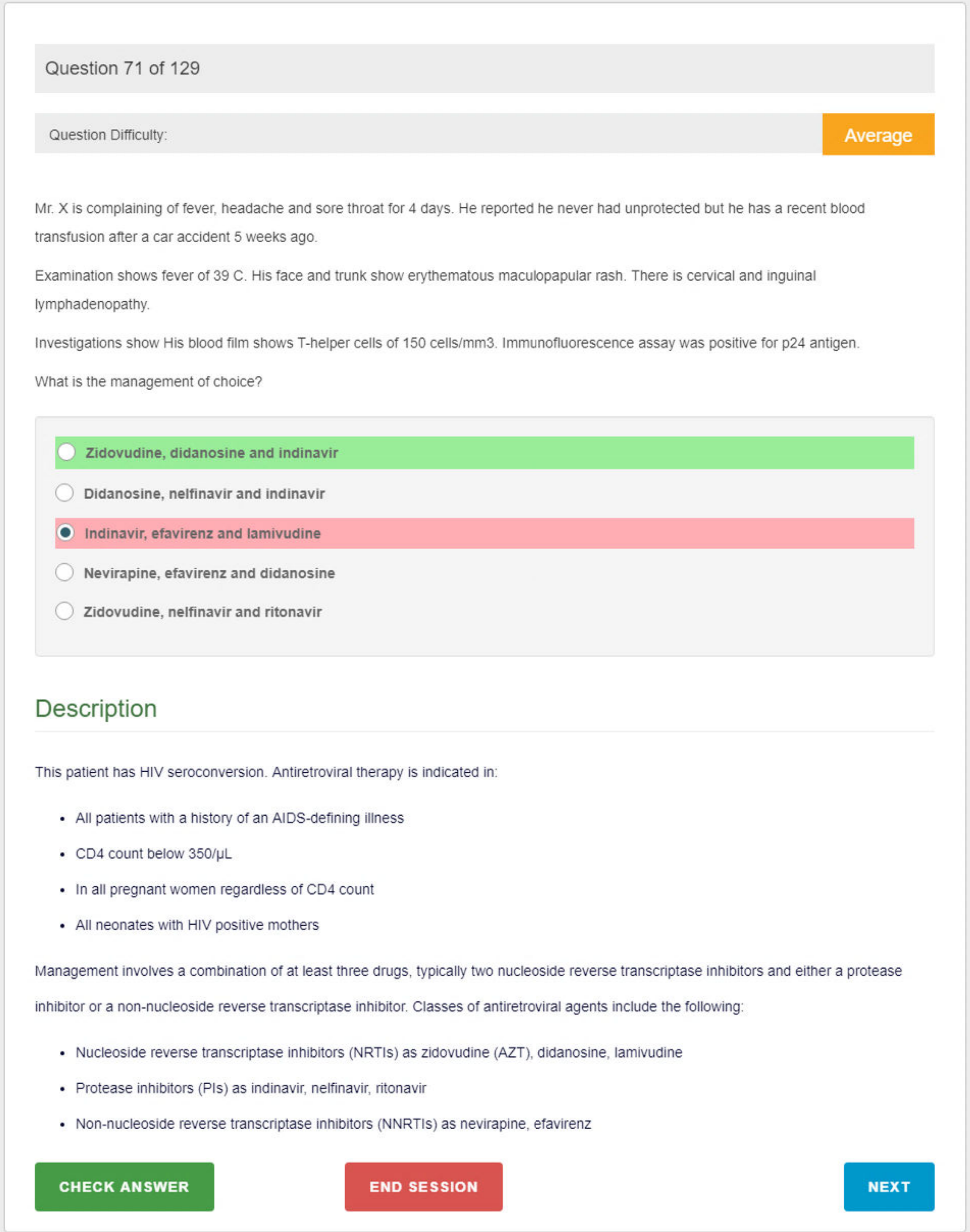
○ **Churg-Strauss syndrome**
○ **Hydatid disease**
● **Tuberculosis**
○ **Weil disease**
○ **Katayama fever**

## Description

Acute Schistosomiasis (Katayama fever) may occur weeks after the initial infection, especially by S. mansoni and S. japonicum. Manifestations include:

- Fever
- Mild itching and a papular dermatitis at the site of piercing
- Abdominal pain
- Cough
- Diarrhea
- Hepatosplenomegaly
- Eosinophilia due to larva migrans

## Session Statistics



Question 71 of 129

Question Difficulty: Average

Mr. X is complaining of fever, headache and sore throat for 4 days. He reported he never had unprotected but he has a recent blood transfusion after a car accident 5 weeks ago.

Examination shows fever of 39 C. His face and trunk show erythematous maculopapular rash. There is cervical and inguinal lymphadenopathy.

Investigations show His blood film shows T-helper cells of 150 cells/mm3. Immunofluorescence assay was positive for p24 antigen.

What is the management of choice?

○ 🟩 **Zidovudine, didanosine and indinavir**
○ **Didanosine, nelfinavir and indinavir**
● 🟥 **Indinavir, efavirenz and lamivudine**
○ **Nevirapine, efavirenz and didanosine**
○ **Zidovudine, nelfinavir and ritonavir**

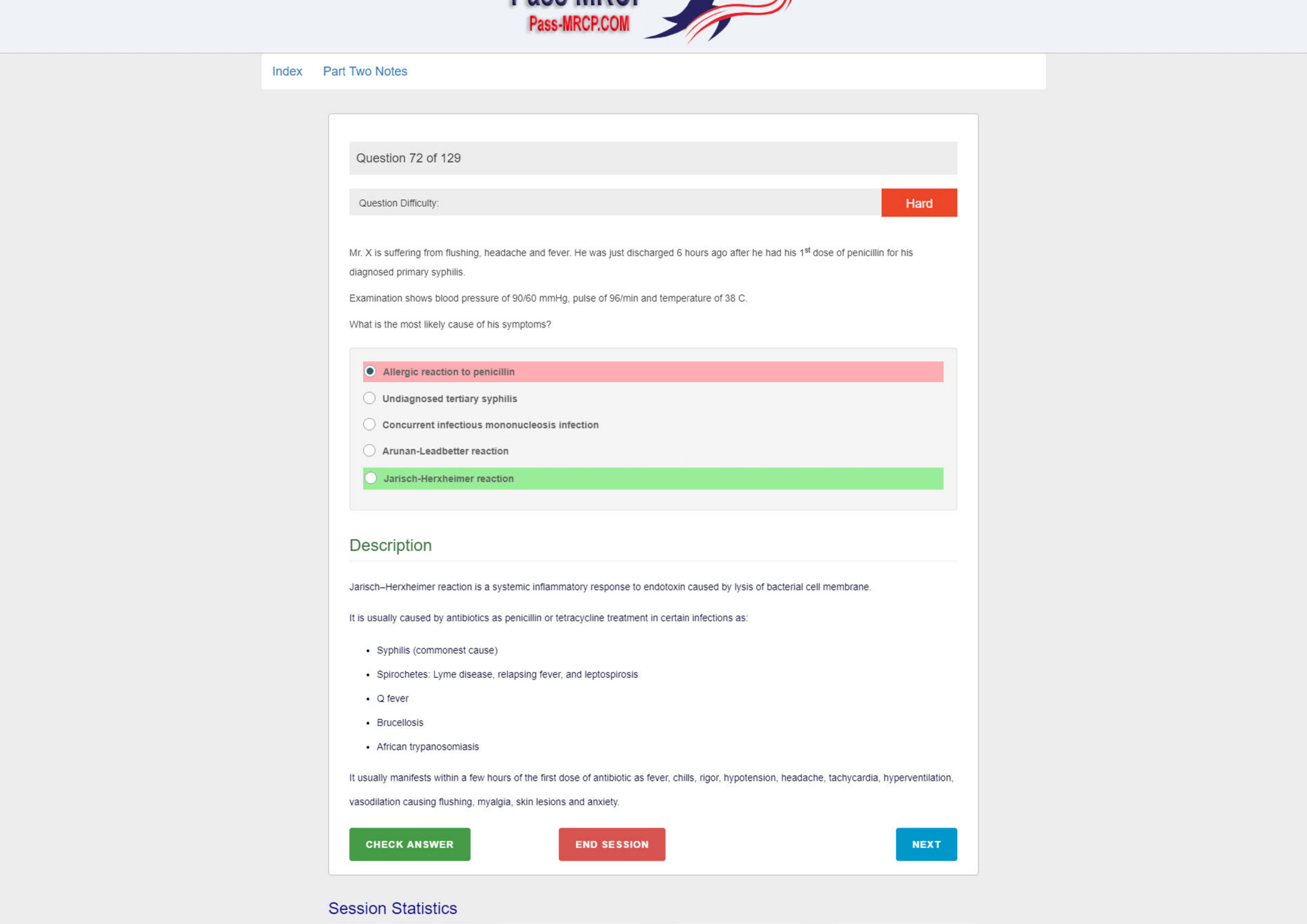
## Description

This patient has HIV seroconversion. Antiretroviral therapy is indicated in:

- All patients with a history of an AIDS-defining illness
- CD4 count below 350/μL
- In all pregnant women regardless of CD4 count
- All neonates with HIV positive mothers

Management involves a combination of at least three drugs, typically two nucleoside reverse transcriptase inhibitors and either a protease inhibitor or a non-nucleoside reverse transcriptase inhibitor. Classes of antiretroviral agents include the following:

- Nucleoside reverse transcriptase inhibitors (NRTIs) as zidovudine (AZT), didanosine, lamivudine
- Protease inhibitors (PIs) as indinavir, nelfinavir, ritonavir
- Non-nucleoside reverse transcriptase inhibitors (NNRTIs) as nevirapine, efavirenz



Question 72 of 129

Question Difficulty: **Hard**

Mr. X is suffering from flushing, headache and fever. He was just discharged 6 hours ago after he had his 1st dose of penicillin for his diagnosed primary syphilis.

Examination shows blood pressure of 90/60 mmHg, pulse of 96/min and temperature of 38 C.

What is the most likely cause of his symptoms?

- ● **Allergic reaction to penicillin**
- ○ **Undiagnosed tertiary syphilis**
- ○ **Concurrent infectious mononucleosis infection**
- ○ **Arunan-Leadbetter reaction**
- ○ **Jarisch-Herxheimer reaction**

## Description

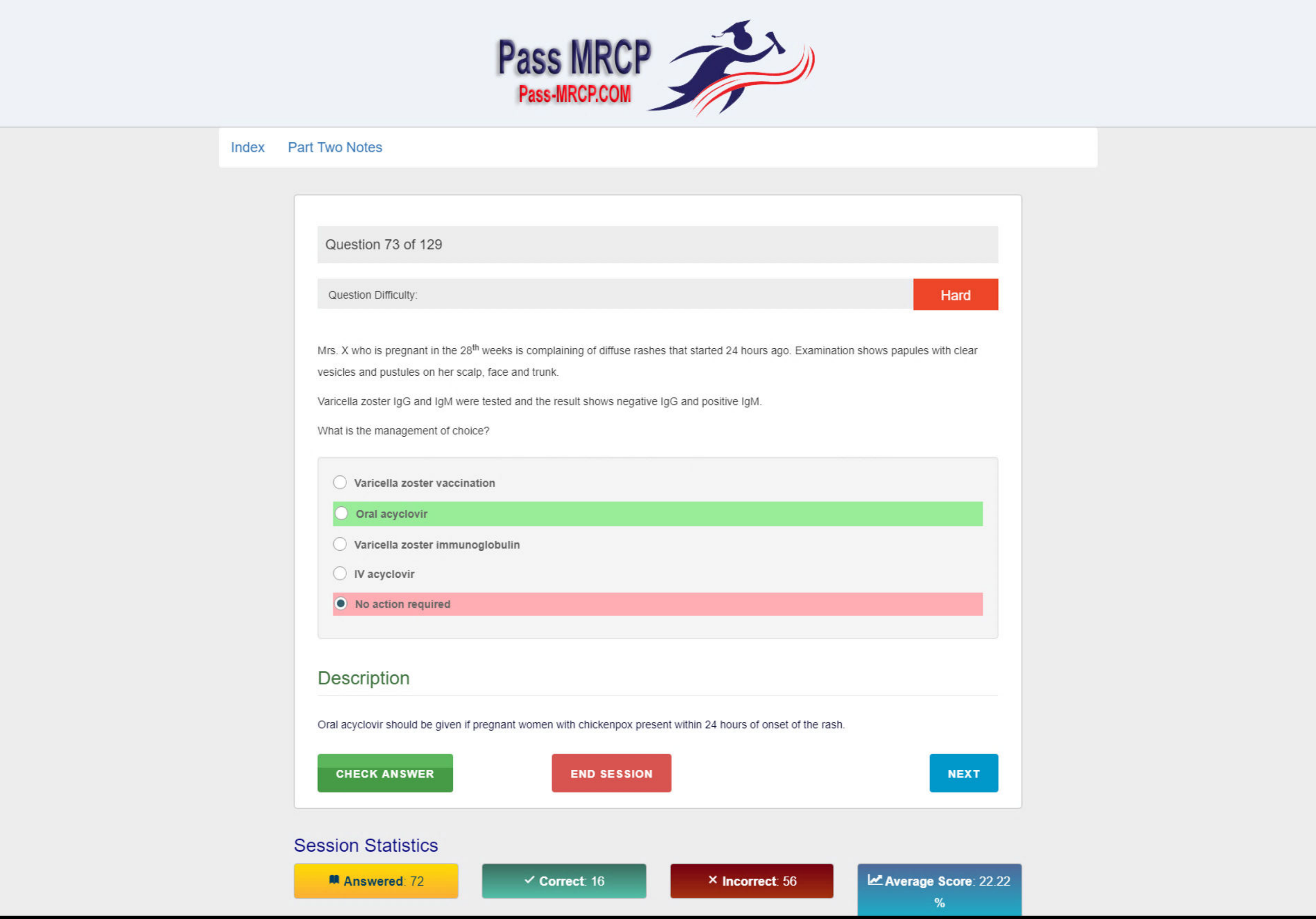
Jarisch–Herxheimer reaction is a systemic inflammatory response to endotoxin caused by lysis of bacterial cell membrane.

It is usually caused by antibiotics as penicillin or tetracycline treatment in certain infections as:

- Syphilis (commonest cause)
- Spirochetes: Lyme disease, relapsing fever, and leptospirosis
- Q fever
- Brucellosis
- African trypanosomiasis

It usually manifests within a few hours of the first dose of antibiotic as fever, chills, rigor, hypotension, headache, tachycardia, hyperventilation, vasodilation causing flushing, myalgia, skin lesions and anxiety.

Session Statistics



Question 73 of 129

Question Difficulty: **Hard**

Mrs. X who is pregnant in the 28th weeks is complaining of diffuse rashes that started 24 hours ago. Examination shows papules with clear vesicles and pustules on her scalp, face and trunk.

Varicella zoster IgG and IgM were tested and the result shows negative IgG and positive IgM.

What is the management of choice?

- ○ **Varicella zoster vaccination**
- ○ **Oral acyclovir**
- ○ **Varicella zoster immunoglobulin**
- ○ **IV acyclovir**
- ● **No action required**

## Description

Oral acyclovir should be given if pregnant women with chickenpox present within 24 hours of onset of the rash.

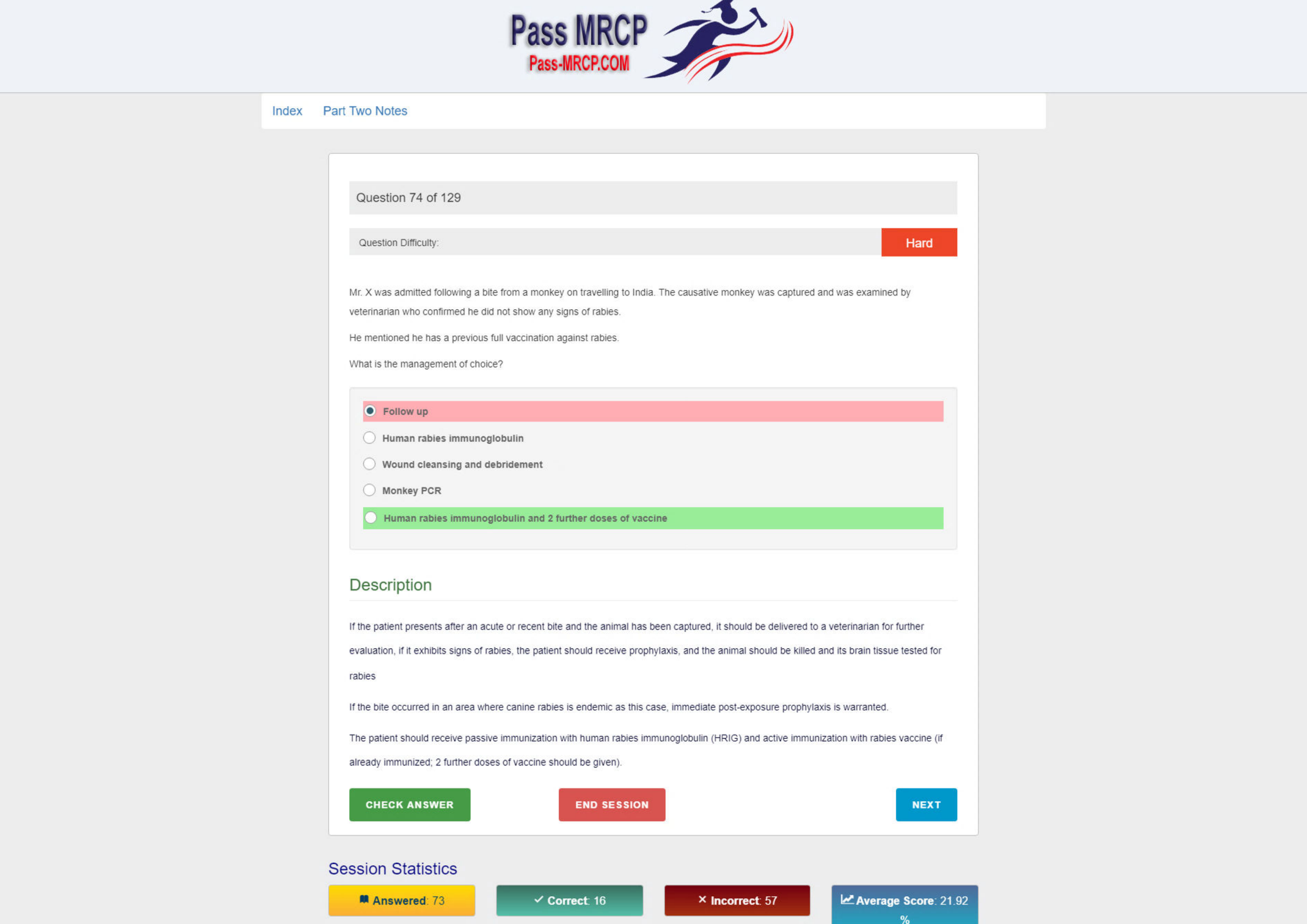
## Session Statistics

**Answered**: 72

✓ **Correct**: 16

✕ **Incorrect**: 56

**Average Score**: 22.22 %



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Question Difficulty: Hard

Mr. X was admitted following a bite from a monkey on travelling to India. The causative monkey was captured and was examined by veterinarian who confirmed he did not show any signs of rabies.

He mentioned he has a previous full vaccination against rabies.

What is the management of choice?

- ● **Follow up**
- ○ **Human rabies immunoglobulin**
- ○ **Wound cleansing and debridement**
- ○ **Monkey PCR**
- ○ **Human rabies immunoglobulin and 2 further doses of vaccine**

## Description

If the patient presents after an acute or recent bite and the animal has been captured, it should be delivered to a veterinarian for further evaluation, if it exhibits signs of rabies, the patient should receive prophylaxis, and the animal should be killed and its brain tissue tested for rabies

If the bite occurred in an area where canine rabies is endemic as this case, immediate post-exposure prophylaxis is warranted.

The patient should receive passive immunization with human rabies immunoglobulin (HRIG) and active immunization with rabies vaccine (if already immunized; 2 further doses of vaccine should be given).

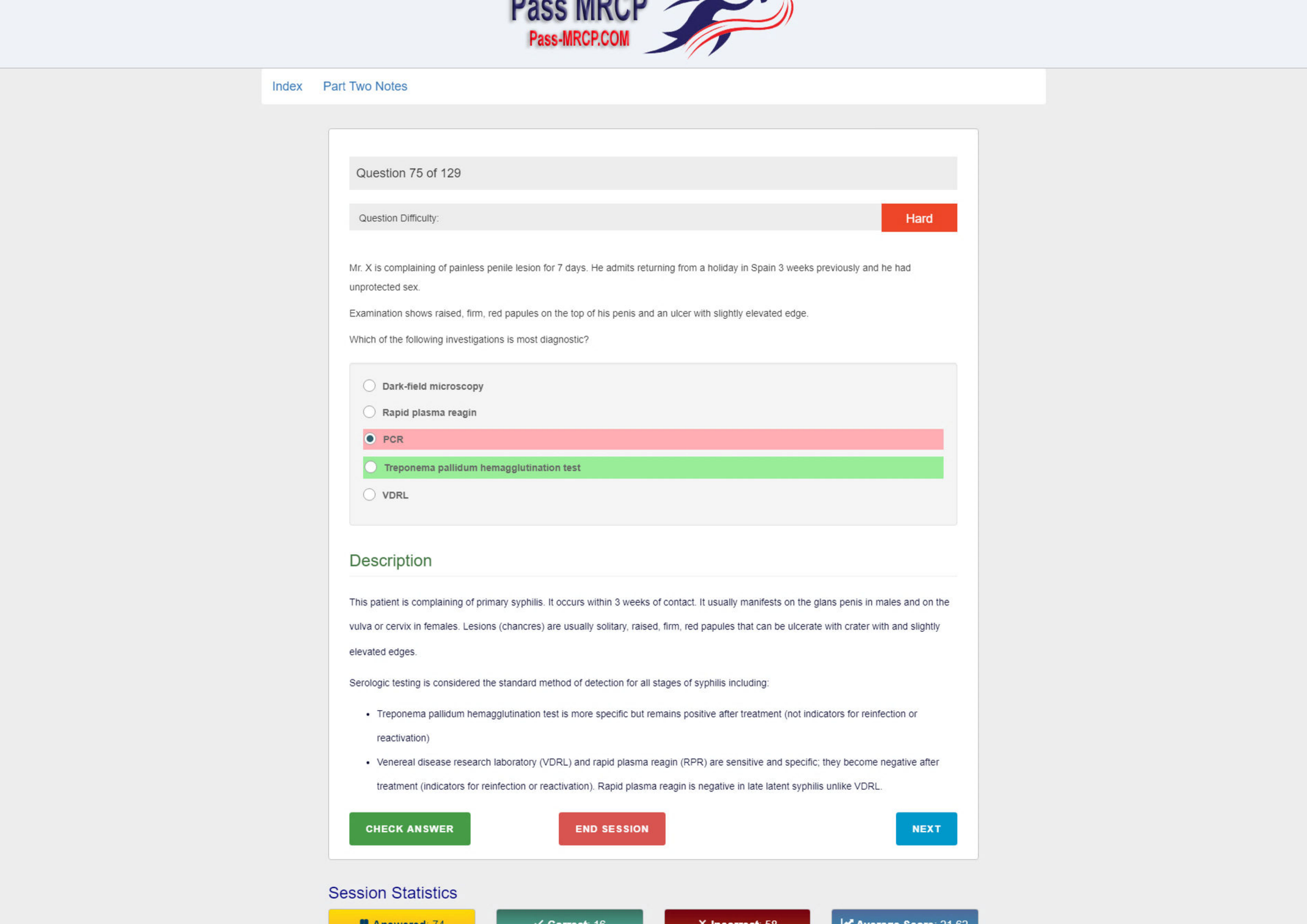
## Session Statistics

**Answered**: 73

✓ **Correct**: 16

✕ **Incorrect**: 57

**Average Score**: 21.92 %



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Question Difficulty: Hard

Mr. X is complaining of painless penile lesion for 7 days. He admits returning from a holiday in Spain 3 weeks previously and he had unprotected sex.

Examination shows raised, firm, red papules on the top of his penis and an ulcer with slightly elevated edge.

Which of the following investigations is most diagnostic?

○ **Dark-field microscopy**

○ **Rapid plasma reagin**

● **PCR**

○ **Treponema pallidum hemagglutination test**

○ **VDRL**

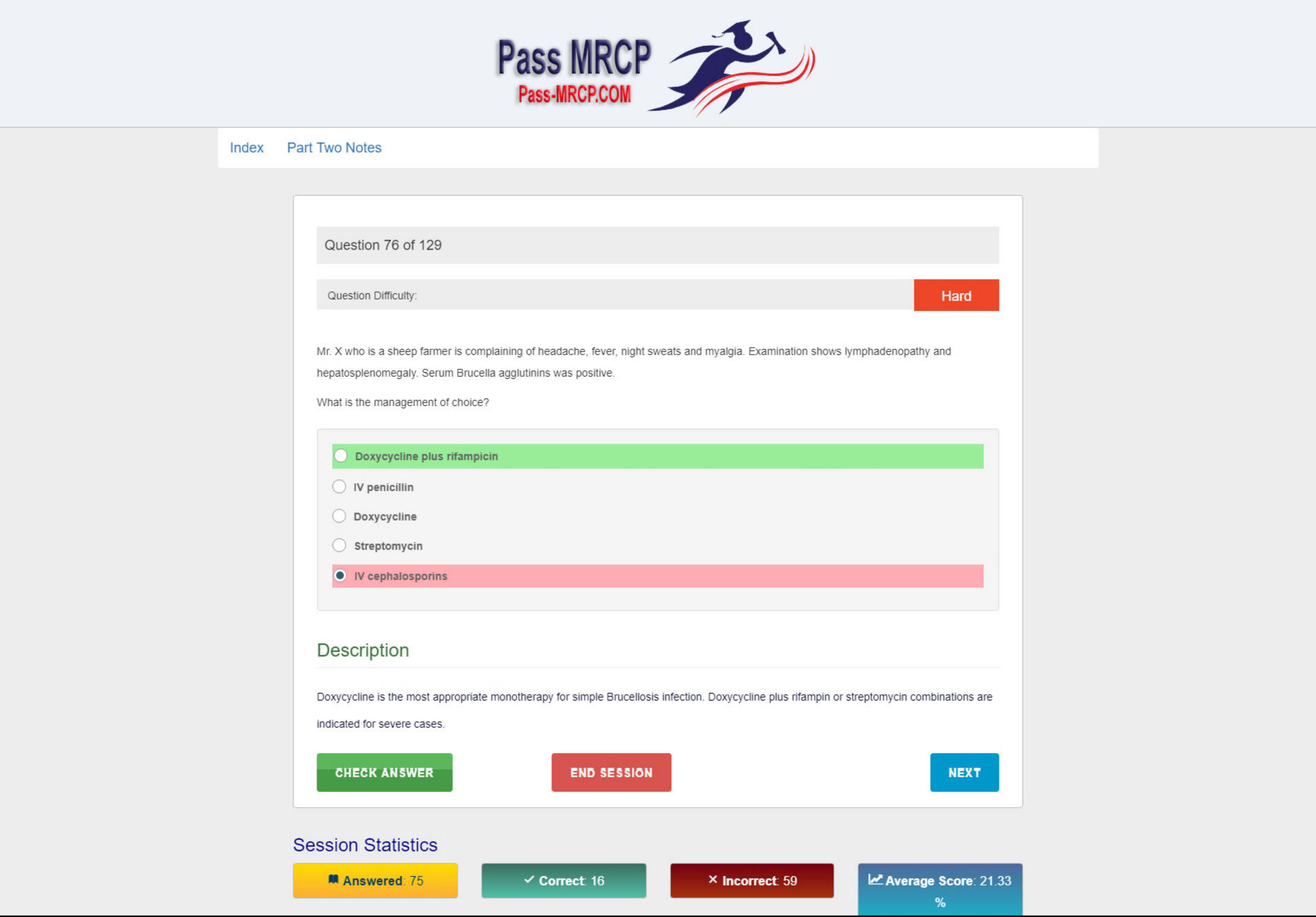
## Description

This patient is complaining of primary syphilis. It occurs within 3 weeks of contact. It usually manifests on the glans penis in males and on the vulva or cervix in females. Lesions (chancres) are usually solitary, raised, firm, red papules that can be ulcerate with crater with and slightly elevated edges.

Serologic testing is considered the standard method of detection for all stages of syphilis including:

- Treponema pallidum hemagglutination test is more specific but remains positive after treatment (not indicators for reinfection or reactivation)
- Venereal disease research laboratory (VDRL) and rapid plasma reagin (RPR) are sensitive and specific; they become negative after treatment (indicators for reinfection or reactivation). Rapid plasma reagin is negative in late latent syphilis unlike VDRL.

Session Statistics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Question Difficulty: Hard

Mr. X who is a sheep farmer is complaining of headache, fever, night sweats and myalgia. Examination shows lymphadenopathy and hepatosplenomegaly. Serum Brucella agglutinins was positive.

What is the management of choice?

- ○ **Doxycycline plus rifampicin**
- ○ **IV penicillin**
- ○ **Doxycycline**
- ○ **Streptomycin**
- ● **IV cephalosporins**

## Description

Doxycycline is the most appropriate monotherapy for simple Brucellosis infection. Doxycycline plus rifampin or streptomycin combinations are indicated for severe cases.

CHECK ANSWER
END SESSION
NEXT

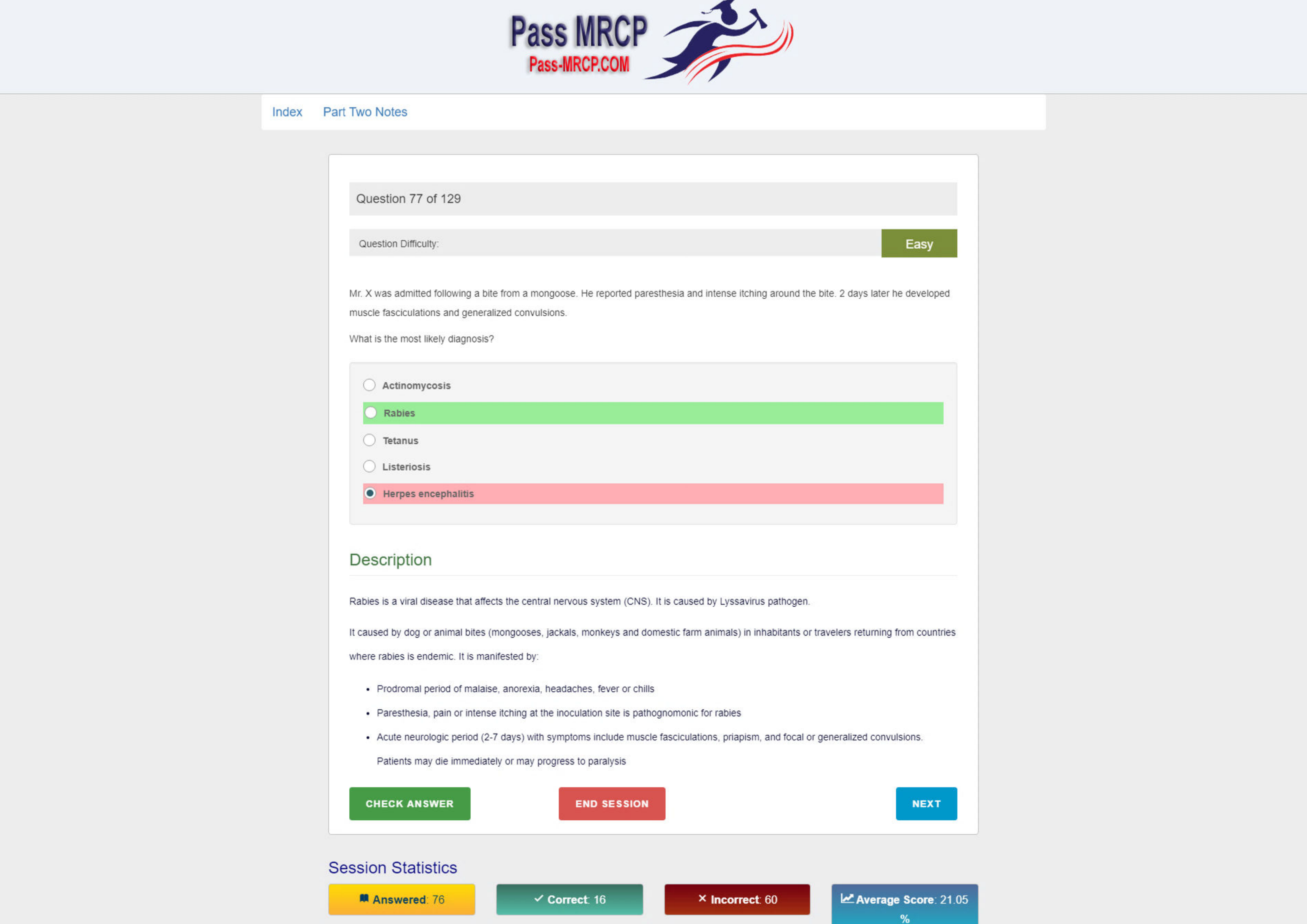
## Session Statistics

**Answered**: 75

✓ **Correct**: 16

✕ **Incorrect**: 59

**Average Score**: 21.33 %



Question 77 of 129

Question Difficulty: Easy

Mr. X was admitted following a bite from a mongoose. He reported paresthesia and intense itching around the bite. 2 days later he developed muscle fasciculations and generalized convulsions.

What is the most likely diagnosis?

○ Actinomycosis
○ Rabies
○ Tetanus
○ Listeriosis
● Herpes encephalitis

## Description

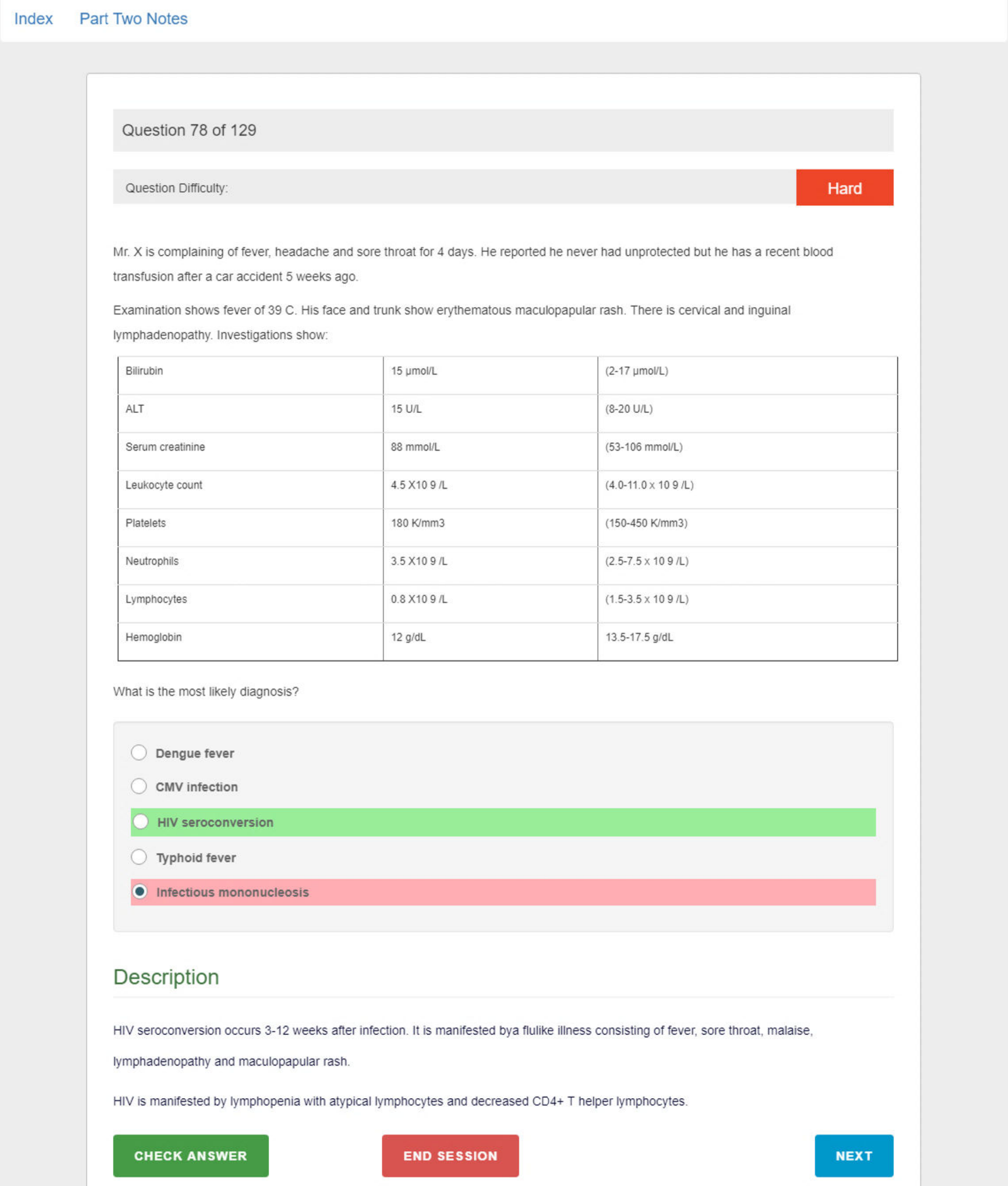
Rabies is a viral disease that affects the central nervous system (CNS). It is caused by Lyssavirus pathogen.

It caused by dog or animal bites (mongooses, jackals, monkeys and domestic farm animals) in inhabitants or travelers returning from countries where rabies is endemic. It is manifested by:

- Prodromal period of malaise, anorexia, headaches, fever or chills
- Paresthesia, pain or intense itching at the inoculation site is pathognomonic for rabies
- Acute neurologic period (2-7 days) with symptoms include muscle fasciculations, priapism, and focal or generalized convulsions. Patients may die immediately or may progress to paralysis

## Session Statistics

Answered: 76
✓ Correct: 16
× Incorrect: 60
Average Score: 21.05 %



Question 78 of 129

Question Difficulty: **Hard**

Mr. X is complaining of fever, headache and sore throat for 4 days. He reported he never had unprotected but he has a recent blood transfusion after a car accident 5 weeks ago.

Examination shows fever of 39 C. His face and trunk show erythematous maculopapular rash. There is cervical and inguinal lymphadenopathy. Investigations show:

| | | |
|---|---|---|
| Bilirubin | 15 µmol/L | (2-17 µmol/L) |
| ALT | 15 U/L | (8-20 U/L) |
| Serum creatinine | 88 mmol/L | (53-106 mmol/L) |
| Leukocyte count | 4.5 X10 9 /L | (4.0-11.0 x 10 9 /L) |
| Platelets | 180 K/mm3 | (150-450 K/mm3) |
| Neutrophils | 3.5 X10 9 /L | (2.5-7.5 x 10 9 /L) |
| Lymphocytes | 0.8 X10 9 /L | (1.5-3.5 x 10 9 /L) |
| Hemoglobin | 12 g/dL | 13.5-17.5 g/dL |

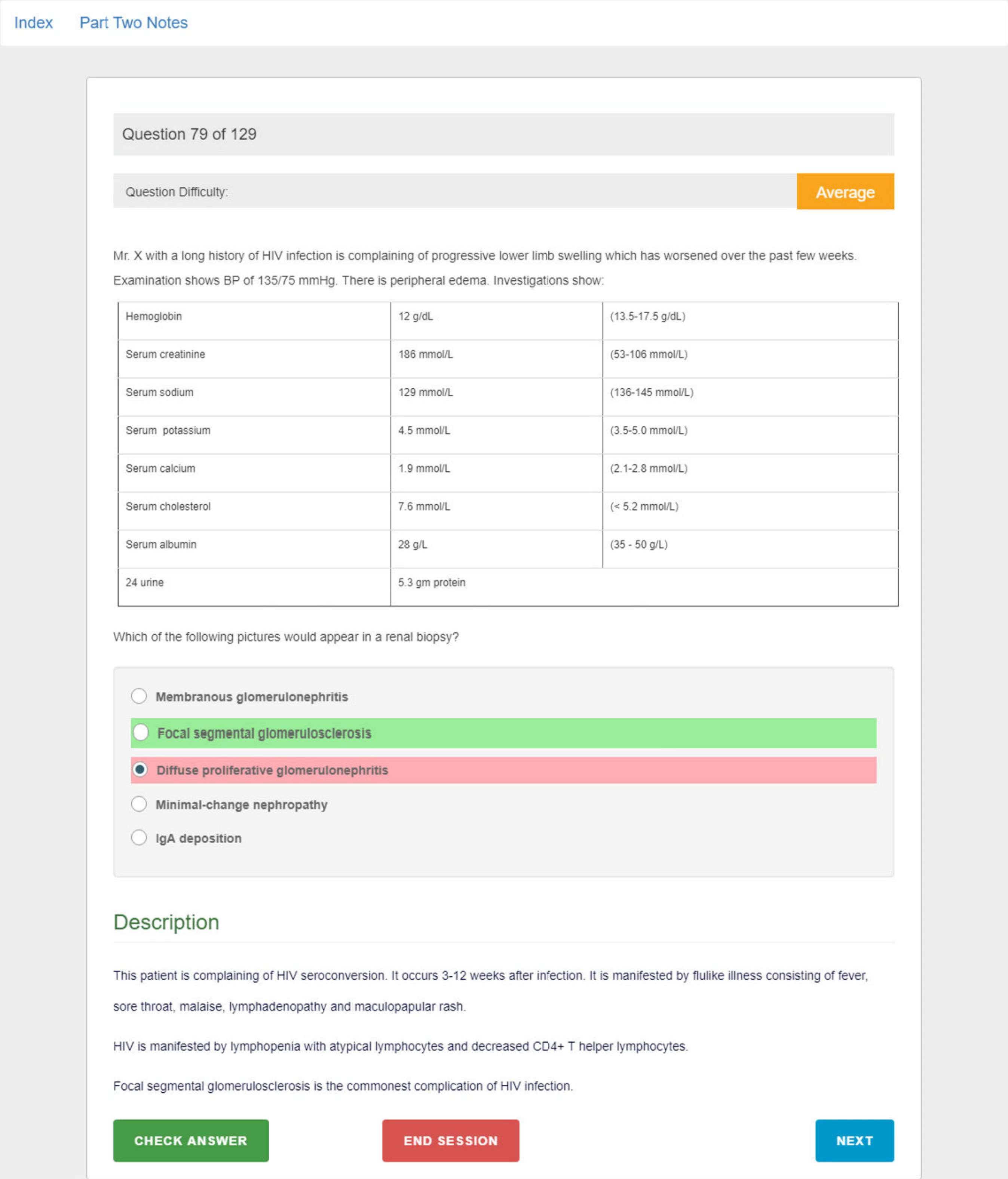
What is the most likely diagnosis?

- ○ **Dengue fever**
- ○ **CMV infection**
- ○ **HIV seroconversion**
- ○ **Typhoid fever**
- ● **Infectious mononucleosis**

## Description

HIV seroconversion occurs 3-12 weeks after infection. It is manifested bya flulike illness consisting of fever, sore throat, malaise, lymphadenopathy and maculopapular rash.

HIV is manifested by lymphopenia with atypical lymphocytes and decreased CD4+ T helper lymphocytes.



Question 79 of 129

Question Difficulty: Average

Mr. X with a long history of HIV infection is complaining of progressive lower limb swelling which has worsened over the past few weeks. Examination shows BP of 135/75 mmHg. There is peripheral edema. Investigations show:

| | | |
|---|---|---|
| Hemoglobin | 12 g/dL | (13.5-17.5 g/dL) |
| Serum creatinine | 186 mmol/L | (53-106 mmol/L) |
| Serum sodium | 129 mmol/L | (136-145 mmol/L) |
| Serum potassium | 4.5 mmol/L | (3.5-5.0 mmol/L) |
| Serum calcium | 1.9 mmol/L | (2.1-2.8 mmol/L) |
| Serum cholesterol | 7.6 mmol/L | (< 5.2 mmol/L) |
| Serum albumin | 28 g/L | (35 - 50 g/L) |
| 24 urine | 5.3 gm protein | |

Which of the following pictures would appear in a renal biopsy?

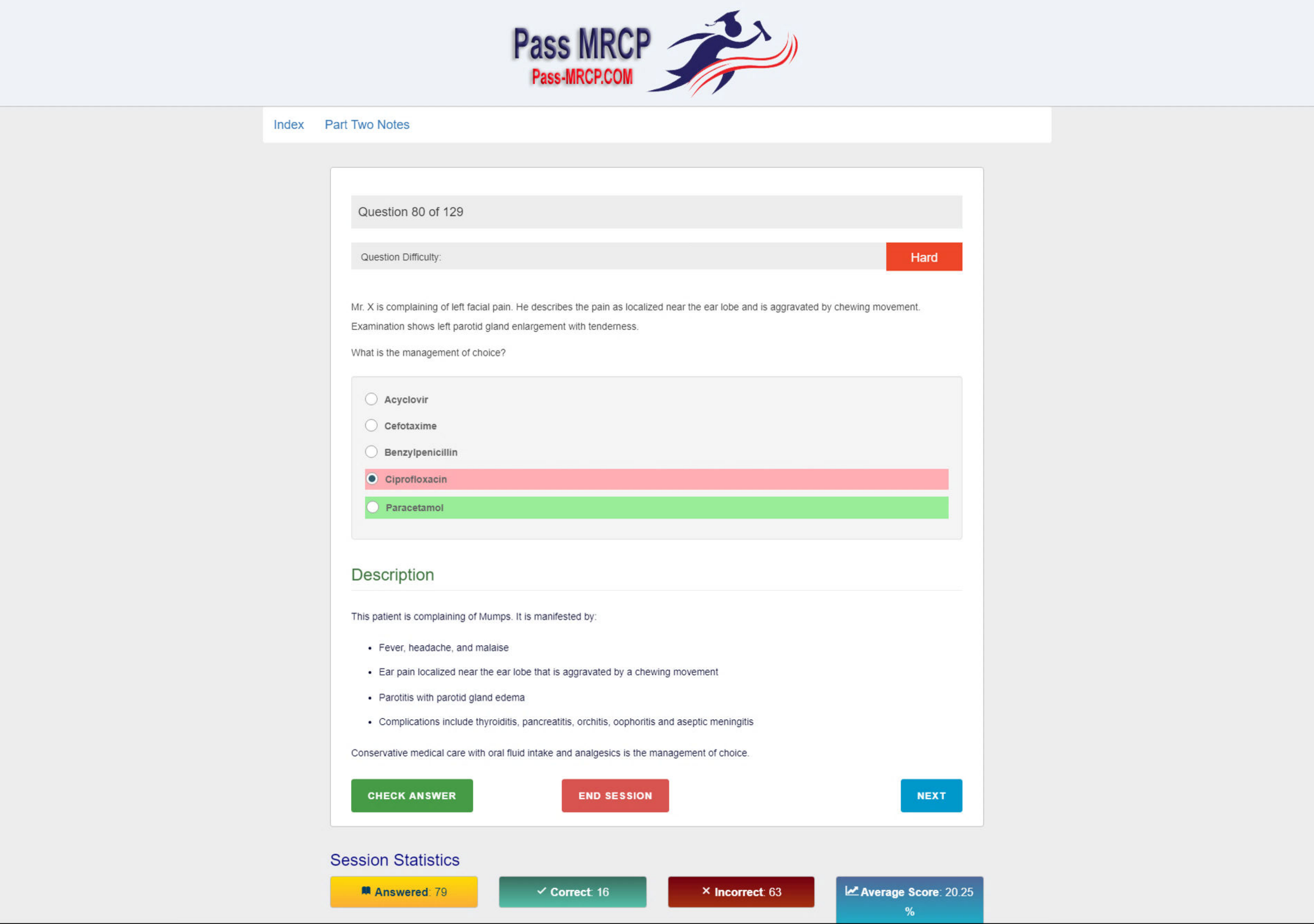
- ○ **Membranous glomerulonephritis**
- ○ **Focal segmental glomerulosclerosis**
- ● **Diffuse proliferative glomerulonephritis**
- ○ **Minimal-change nephropathy**
- ○ **IgA deposition**

## Description

This patient is complaining of HIV seroconversion. It occurs 3-12 weeks after infection. It is manifested by flulike illness consisting of fever, sore throat, malaise, lymphadenopathy and maculopapular rash.

HIV is manifested by lymphopenia with atypical lymphocytes and decreased CD4+ T helper lymphocytes.

Focal segmental glomerulosclerosis is the commonest complication of HIV infection.



Question 80 of 129

Question Difficulty: Hard

Mr. X is complaining of left facial pain. He describes the pain as localized near the ear lobe and is aggravated by chewing movement. Examination shows left parotid gland enlargement with tenderness.

What is the management of choice?

○ Acyclovir
○ Cefotaxime
○ Benzylpenicillin
● Ciprofloxacin
○ Paracetamol

## Description

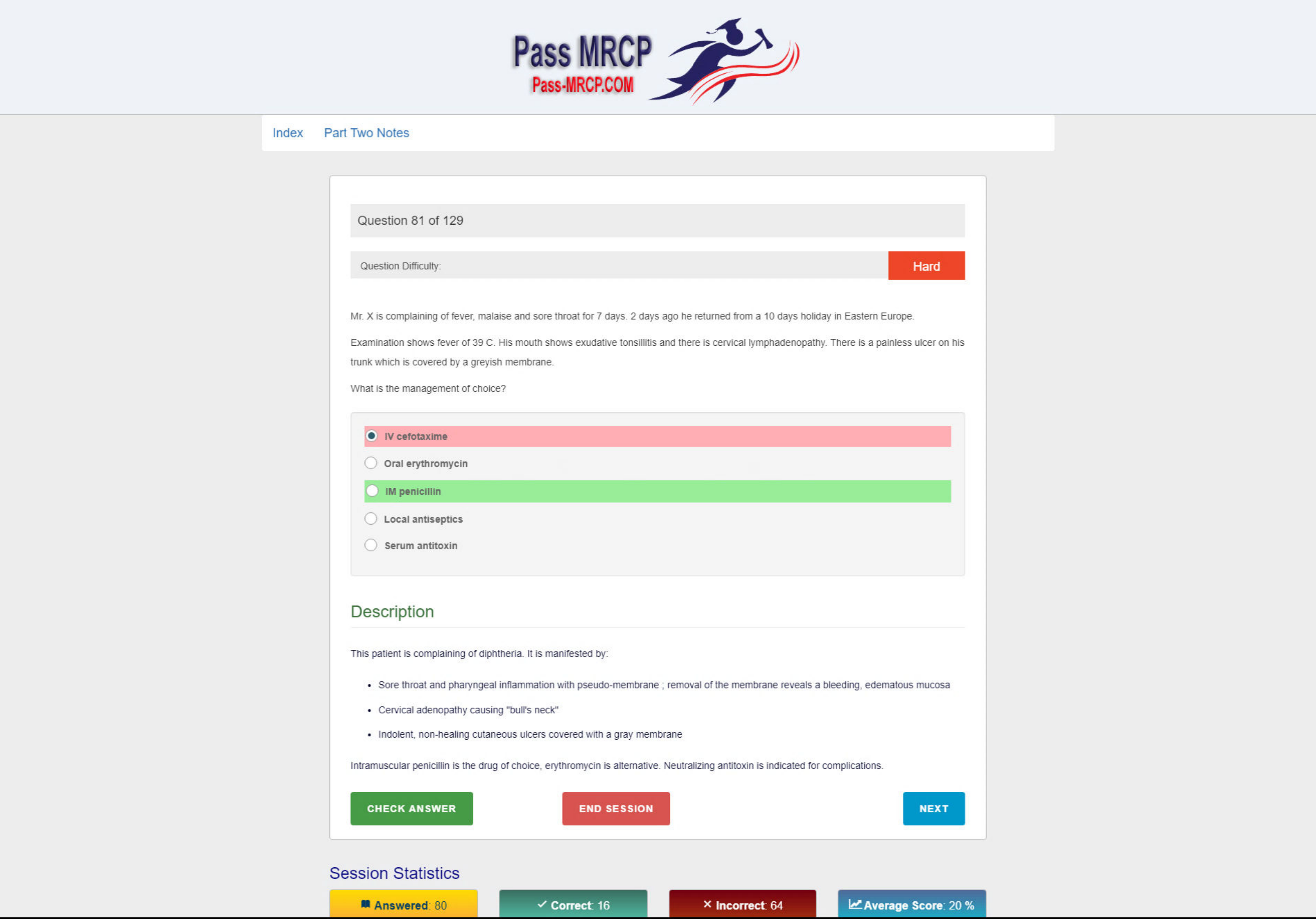
This patient is complaining of Mumps. It is manifested by:

- Fever, headache, and malaise
- Ear pain localized near the ear lobe that is aggravated by a chewing movement
- Parotitis with parotid gland edema
- Complications include thyroiditis, pancreatitis, orchitis, oophoritis and aseptic meningitis

Conservative medical care with oral fluid intake and analgesics is the management of choice.

Session Statistics

Answered: 79
✓ Correct: 16
✕ Incorrect: 63
Average Score: 20.25 %



Question 81 of 129

Question Difficulty: Hard

Mr. X is complaining of fever, malaise and sore throat for 7 days. 2 days ago he returned from a 10 days holiday in Eastern Europe.

Examination shows fever of 39 C. His mouth shows exudative tonsillitis and there is cervical lymphadenopathy. There is a painless ulcer on his trunk which is covered by a greyish membrane.

What is the management of choice?

● IV cefotaxime
○ Oral erythromycin
○ IM penicillin
○ Local antiseptics
○ Serum antitoxin

## Description

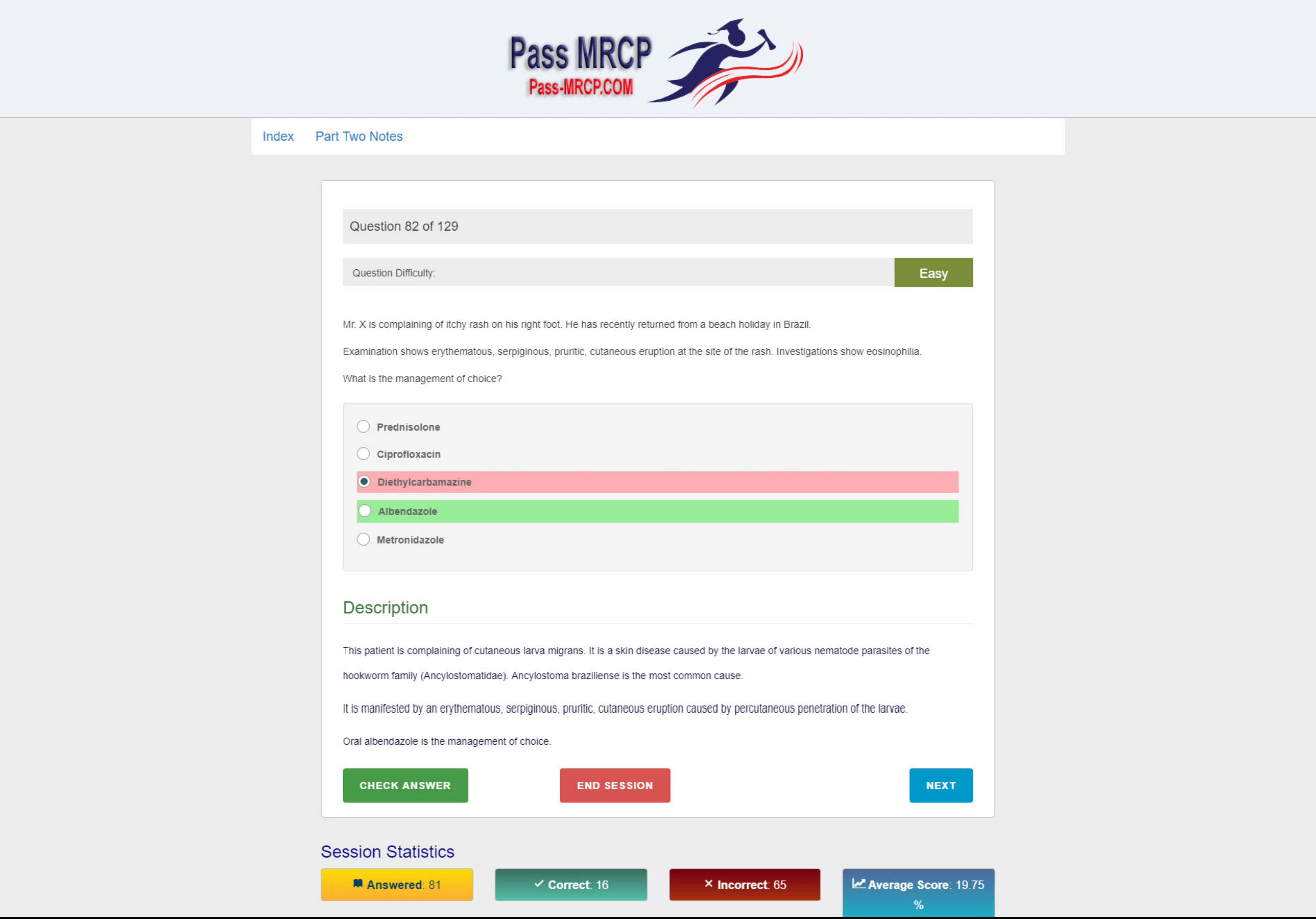
This patient is complaining of diphtheria. It is manifested by:

- Sore throat and pharyngeal inflammation with pseudo-membrane ; removal of the membrane reveals a bleeding, edematous mucosa
- Cervical adenopathy causing "bull's neck"
- Indolent, non-healing cutaneous ulcers covered with a gray membrane

Intramuscular penicillin is the drug of choice, erythromycin is alternative. Neutralizing antitoxin is indicated for complications.

Session Statistics

Answered: 80
✓ Correct: 16
× Incorrect: 64
Average Score: 20 %



Question 82 of 129

Question Difficulty: Easy

Mr. X is complaining of itchy rash on his right foot. He has recently returned from a beach holiday in Brazil.

Examination shows erythematous, serpiginous, pruritic, cutaneous eruption at the site of the rash. Investigations show eosinophilia.

What is the management of choice?

○ **Prednisolone**
○ **Ciprofloxacin**
● **Diethylcarbamazine**
○ **Albendazole**
○ **Metronidazole**

## Description

This patient is complaining of cutaneous larva migrans. It is a skin disease caused by the larvae of various nematode parasites of the hookworm family (Ancylostomatidae). Ancylostoma braziliense is the most common cause.

It is manifested by an erythematous, serpiginous, pruritic, cutaneous eruption caused by percutaneous penetration of the larvae.

Oral albendazole is the management of choice.

## Session Statistics

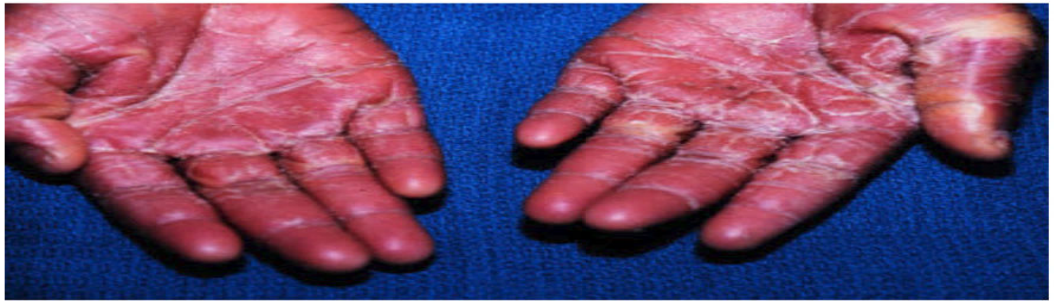
Answered: 81
✓ Correct: 16
✕ Incorrect: 65
Average Score: 19.75 %

Question 83 of 129

Question Difficulty: **Hard**

20 years Miss X is complaining of fever, profuse vomiting and diarrhea for 8 hours. She also reported diffuse rash that started with the onset of the fever. She also noted drop of urine since the start of the fever.

Examination shows temperature of 40 C, blood pressure of 80/50 mmHg and pulse 140/min. There is faint erythematous rash on her extremities. Her tongue and buccal mucosa are noted to be red and hyperemic. His hand shows lesion in the image.



Investigations show elevated serum creatinine and neutrophilia.

What is the most likely diagnosis?

○ **Staphylococcus toxic shock syndrome**

○ **CMV infection**

○ **Typhoid fever**

● **Infectious mononucleosis**

○ **Streptococcus toxic shock syndrome**

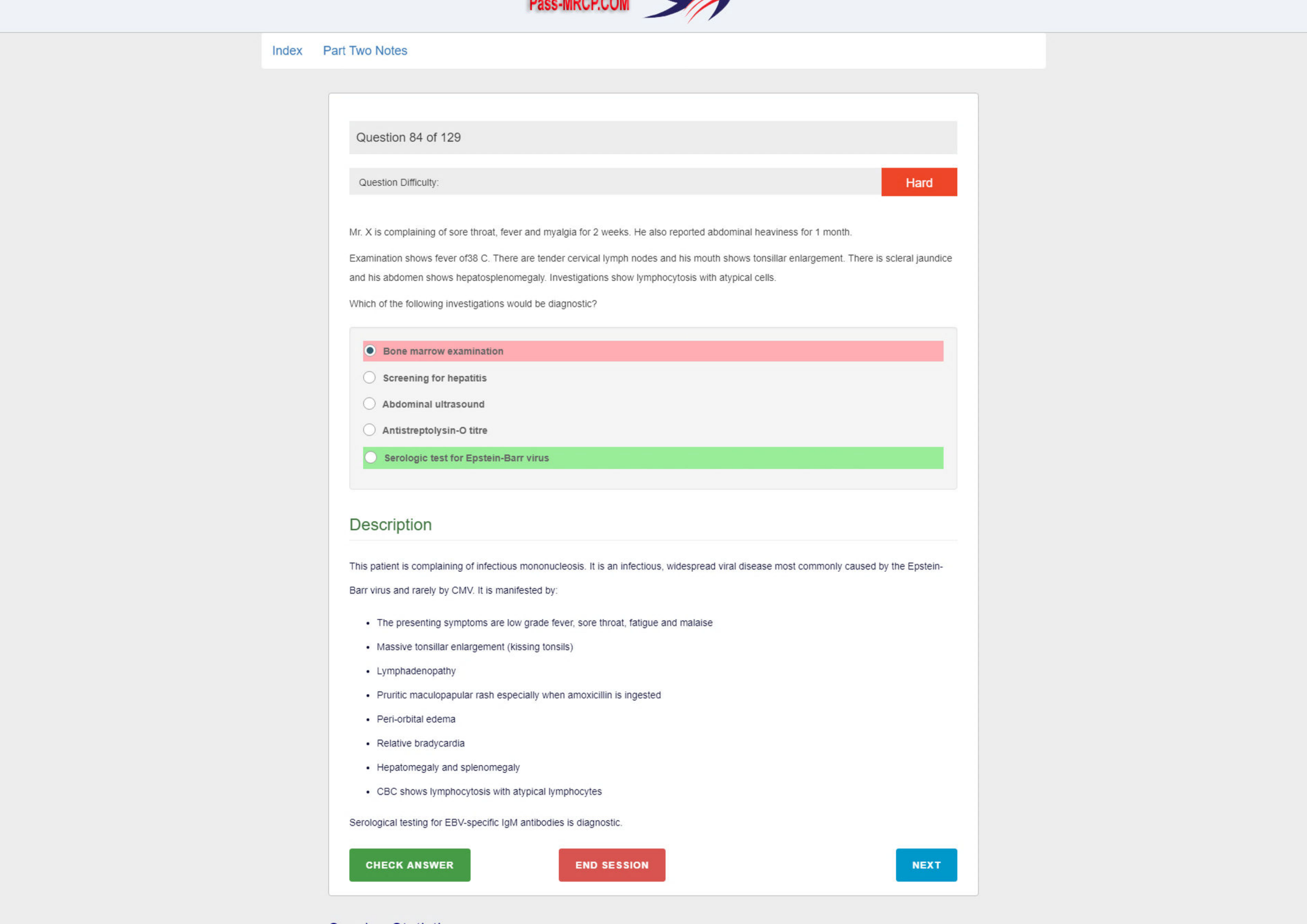
## Description

Toxic shock syndrome (TSS) is a toxin-mediated acute life-threatening illness, usually precipitated by infection with either Staphylococcus aureus or Streptococcus pyogenes (GAS). It is manifested by:

- High fever, shock, malaise and confusion, which can rapidly progress to stupor and coma
- Rash (sunburn like) seen early in the course of illness and affects any region of the body, including the lips, mouth, eyes, palms and soles. It desquamates, or peels off, after 10–14 days
- Multiple organ failure

Staphylococcus toxic shock syndrome (STSS) most commonly occurs in women, usually those who are using tampons, and develops within 5 days after the onset of menstruation.

TSS caused by the Streptococcus pyogenes typically presents in people with pre-existing skin infections with the bacteria.



Question 84 of 129

Question Difficulty: **Hard**

Mr. X is complaining of sore throat, fever and myalgia for 2 weeks. He also reported abdominal heaviness for 1 month.

Examination shows fever of38 C. There are tender cervical lymph nodes and his mouth shows tonsillar enlargement. There is scleral jaundice and his abdomen shows hepatosplenomegaly. Investigations show lymphocytosis with atypical cells.

Which of the following investigations would be diagnostic?

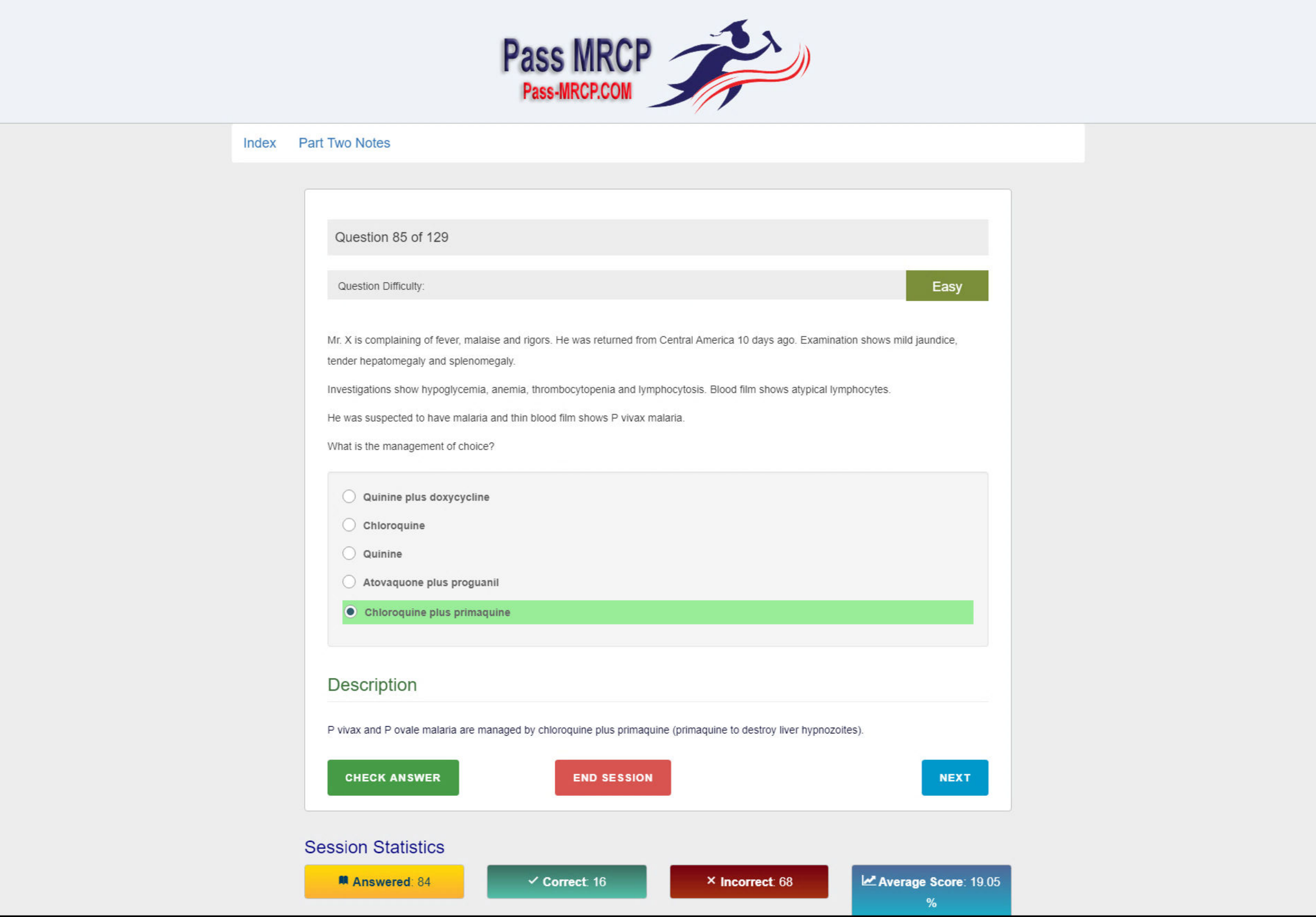
● **Bone marrow examination**
○ **Screening for hepatitis**
○ **Abdominal ultrasound**
○ **Antistreptolysin-O titre**
○ **Serologic test for Epstein-Barr virus**

## Description

This patient is complaining of infectious mononucleosis. It is an infectious, widespread viral disease most commonly caused by the Epstein-Barr virus and rarely by CMV. It is manifested by:

- The presenting symptoms are low grade fever, sore throat, fatigue and malaise
- Massive tonsillar enlargement (kissing tonsils)
- Lymphadenopathy
- Pruritic maculopapular rash especially when amoxicillin is ingested
- Peri-orbital edema
- Relative bradycardia
- Hepatomegaly and splenomegaly
- CBC shows lymphocytosis with atypical lymphocytes

Serological testing for EBV-specific IgM antibodies is diagnostic.



Question 85 of 129

Question Difficulty: Easy

Mr. X is complaining of fever, malaise and rigors. He was returned from Central America 10 days ago. Examination shows mild jaundice, tender hepatomegaly and splenomegaly.

Investigations show hypoglycemia, anemia, thrombocytopenia and lymphocytosis. Blood film shows atypical lymphocytes.

He was suspected to have malaria and thin blood film shows P vivax malaria.

What is the management of choice?

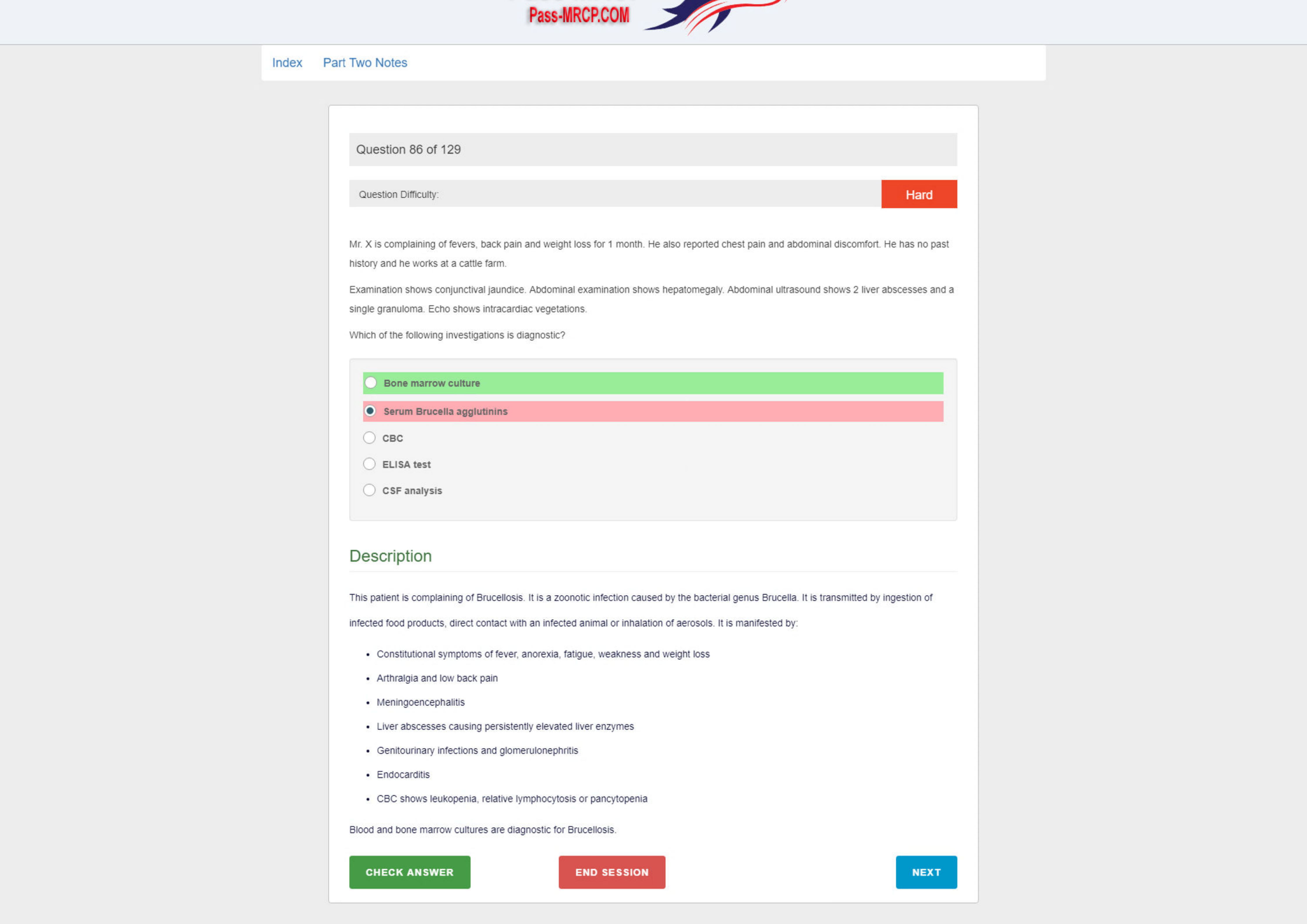
○ **Quinine plus doxycycline**
○ **Chloroquine**
○ **Quinine**
○ **Atovaquone plus proguanil**
● **Chloroquine plus primaquine**

## Description

P vivax and P ovale malaria are managed by chloroquine plus primaquine (primaquine to destroy liver hypnozoites).

## Session Statistics

**Answered**: 84
✓ **Correct**: 16
× **Incorrect**: 68
**Average Score**: 19.05 %



Question 86 of 129

Question Difficulty: Hard

Mr. X is complaining of fevers, back pain and weight loss for 1 month. He also reported chest pain and abdominal discomfort. He has no past history and he works at a cattle farm.

Examination shows conjunctival jaundice. Abdominal examination shows hepatomegaly. Abdominal ultrasound shows 2 liver abscesses and a single granuloma. Echo shows intracardiac vegetations.

Which of the following investigations is diagnostic?

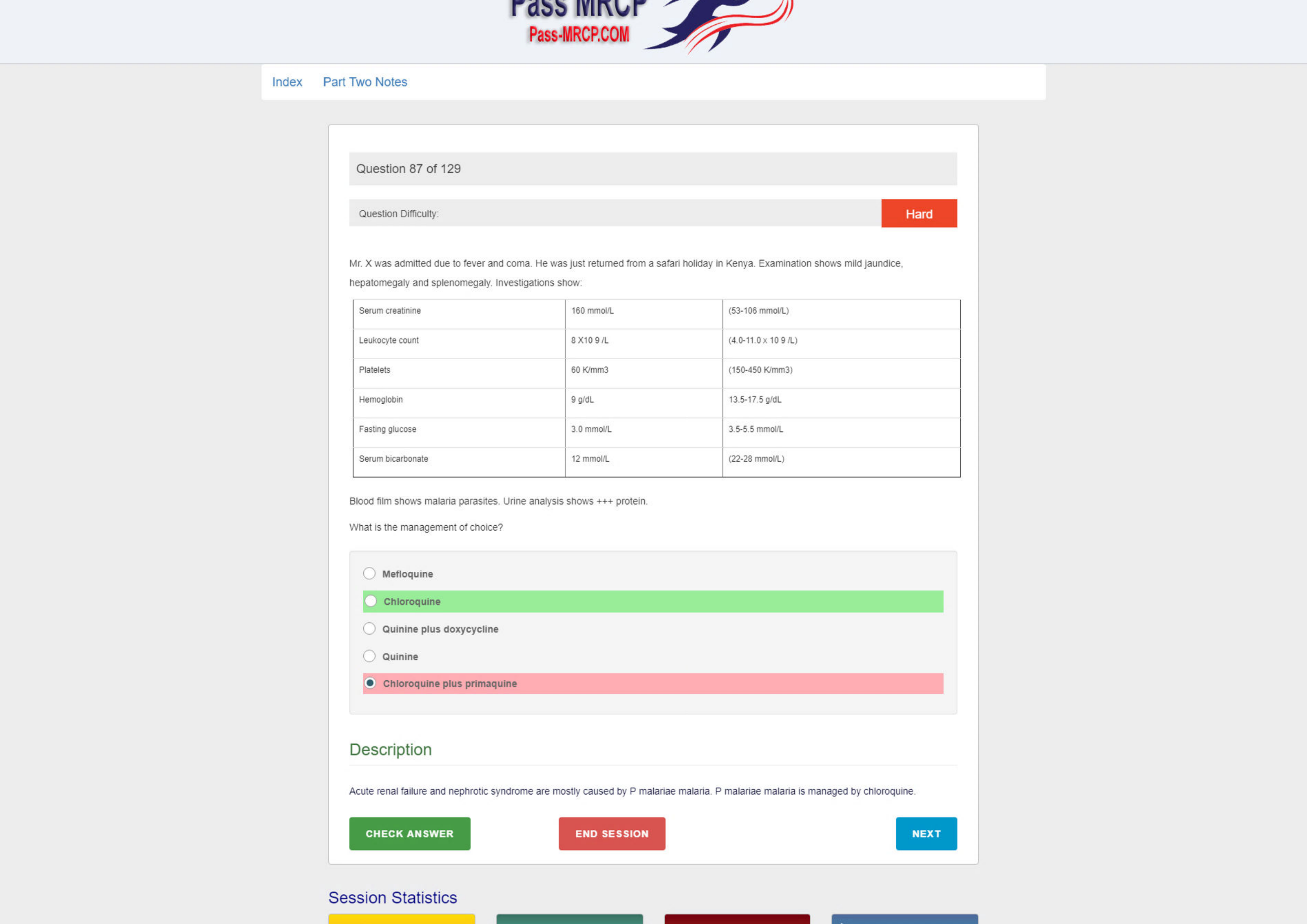
○ **Bone marrow culture**
● **Serum Brucella agglutinins**
○ **CBC**
○ **ELISA test**
○ **CSF analysis**

## Description

This patient is complaining of Brucellosis. It is a zoonotic infection caused by the bacterial genus Brucella. It is transmitted by ingestion of infected food products, direct contact with an infected animal or inhalation of aerosols. It is manifested by:

- Constitutional symptoms of fever, anorexia, fatigue, weakness and weight loss
- Arthralgia and low back pain
- Meningoencephalitis
- Liver abscesses causing persistently elevated liver enzymes
- Genitourinary infections and glomerulonephritis
- Endocarditis
- CBC shows leukopenia, relative lymphocytosis or pancytopenia

Blood and bone marrow cultures are diagnostic for Brucellosis.



Question 87 of 129

Question Difficulty: **Hard**

Mr. X was admitted due to fever and coma. He was just returned from a safari holiday in Kenya. Examination shows mild jaundice, hepatomegaly and splenomegaly. Investigations show:

| | | |
|---|---|---|
| Serum creatinine | 160 mmol/L | (53-106 mmol/L) |
| Leukocyte count | 8 X10 9 /L | (4.0-11.0 x 10 9 /L) |
| Platelets | 60 K/mm3 | (150-450 K/mm3) |
| Hemoglobin | 9 g/dL | 13.5-17.5 g/dL |
| Fasting glucose | 3.0 mmol/L | 3.5-5.5 mmol/L |
| Serum bicarbonate | 12 mmol/L | (22-28 mmol/L) |

Blood film shows malaria parasites. Urine analysis shows +++ protein.

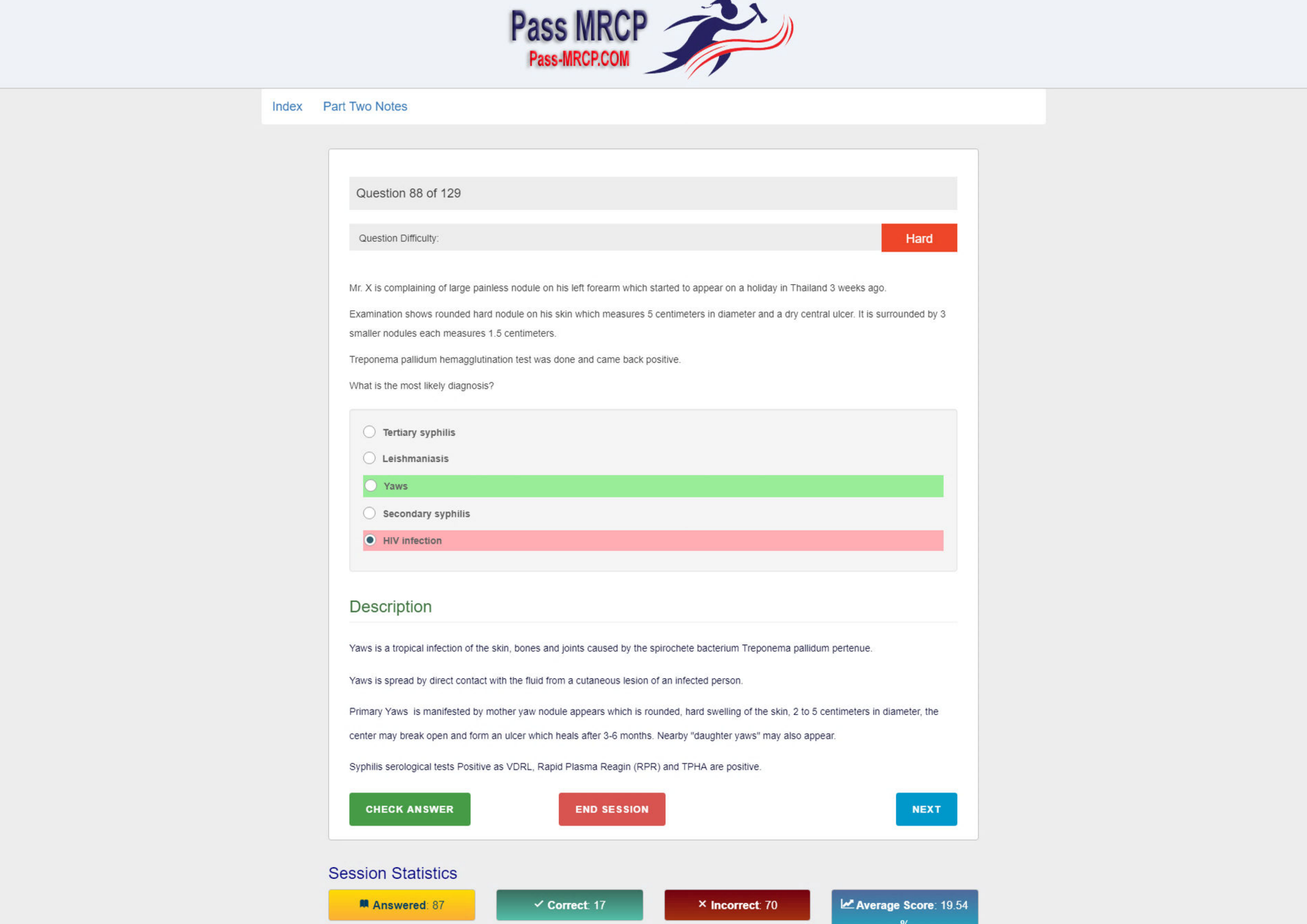
What is the management of choice?

- ○ **Mefloquine**
- ○ **Chloroquine**
- ○ **Quinine plus doxycycline**
- ○ **Quinine**
- ● **Chloroquine plus primaquine**

## Description

Acute renal failure and nephrotic syndrome are mostly caused by P malariae malaria. P malariae malaria is managed by chloroquine.

## Session Statistics



Question 88 of 129

Question Difficulty: **Hard**

Mr. X is complaining of large painless nodule on his left forearm which started to appear on a holiday in Thailand 3 weeks ago.

Examination shows rounded hard nodule on his skin which measures 5 centimeters in diameter and a dry central ulcer. It is surrounded by 3 smaller nodules each measures 1.5 centimeters.

Treponema pallidum hemagglutination test was done and came back positive.

What is the most likely diagnosis?

- ○ **Tertiary syphilis**
- ○ **Leishmaniasis**
- ○ **Yaws**
- ○ **Secondary syphilis**
- ● **HIV infection**

## Description

Yaws is a tropical infection of the skin, bones and joints caused by the spirochete bacterium Treponema pallidum pertenue.

Yaws is spread by direct contact with the fluid from a cutaneous lesion of an infected person.

Primary Yaws is manifested by mother yaw nodule appears which is rounded, hard swelling of the skin, 2 to 5 centimeters in diameter, the center may break open and form an ulcer which heals after 3-6 months. Nearby "daughter yaws" may also appear.

Syphilis serological tests Positive as VDRL, Rapid Plasma Reagin (RPR) and TPHA are positive.

## Session Statistics

**Answered**: 87
**Correct**: 17
**Incorrect**: 70
**Average Score**: 19.54

Question 89 of 129

Question Difficulty: **Average**

Mr. X who works in a barn is admitted due to fever, dyspnea and neck stiffness. Examination shows positive Kernig sign. The eyes show conjunctivitis and jaundice. Abdominal examination shows hepatosplenomegaly.

CXR shows basal lung infiltrates and ECHO shows dilated hypokinetic chambers. Investigations show:

| | | |
|---|---|---|
| Bilirubin | 62 μmol/L | (2-17 μmol/L) |
| ALT | 160 U/L | (8-20 U/L) |
| Serum creatinine | 98 mmol/L | (53-106 mmol/L) |
| Leukocyte count | 12 X10 9 /L | (4.0-11.0 x 10 9 /L) |
| Platelets | 160 K/mm3 | (150-450 K/mm3) |
| Neutrophils | 8 X10 9 /L | (2.5-7.5 x 10 9 /L) |

What is the most likely diagnosis?

○ **Brucellosis**

○ **Lyme disease**

○ **Weil disease**

○ **Psittacosis**

● **Septicemia**

## Description

Leptospirosis is the most common zoonosis that is caused by pathogenic spirochetes of the genus Leptospira. It is manifested by:

- Constitutional symptoms of fever, rigors, nausea and vomiting
- Pharyngitis
- Conjunctivitis
- Myalgia
- Non-pruritic rash

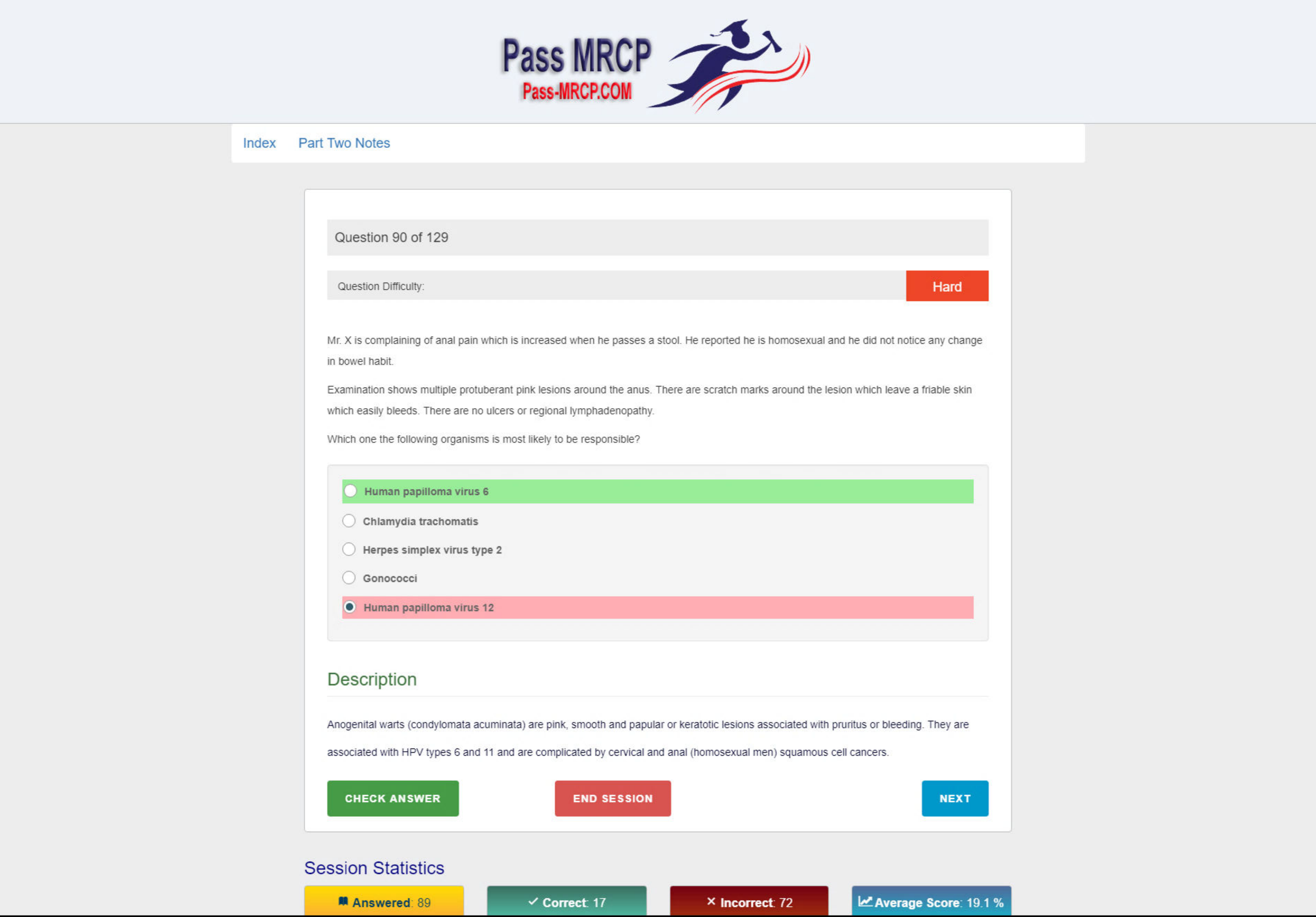
Icteric leptospirosis (Weil disease) is a severe illness with manifestations including:

- Jaundice with hepatomegaly and splenomegaly
- Renal failure
- Meningitis
- Myocarditis
- Hemorrhage

CHECK ANSWER END SESSION NEXT

## Session Statistics

**Answered**: 88 ✓ **Correct**: 17 ✕ **Incorrect**: 71 **Average Score**: 19.32 %



Question 90 of 129

Question Difficulty: **Hard**

Mr. X is complaining of anal pain which is increased when he passes a stool. He reported he is homosexual and he did not notice any change in bowel habit.

Examination shows multiple protuberant pink lesions around the anus. There are scratch marks around the lesion which leave a friable skin which easily bleeds. There are no ulcers or regional lymphadenopathy.

Which one the following organisms is most likely to be responsible?

- ○ **Human papilloma virus 6**
- ○ **Chlamydia trachomatis**
- ○ **Herpes simplex virus type 2**
- ○ **Gonococci**
- ● **Human papilloma virus 12**

## Description

Anogenital warts (condylomata acuminata) are pink, smooth and papular or keratotic lesions associated with pruritus or bleeding. They are associated with HPV types 6 and 11 and are complicated by cervical and anal (homosexual men) squamous cell cancers.

## Session Statistics

**Answered**: 89
✓ **Correct**: 17
× **Incorrect**: 72
**Average Score**: 19.1 %

Question 91 of 129

Question Difficulty: **Hard**

Mr. X is complaining of fever, seizures, drowsiness and neck stiffness. He was just returned from a scientific expedition in Zimbabwe 14 days ago. He reported dark urine.

Examination shows fever of 39.5 C, Glasgow Coma Scale of 8 and BP of 90/60 mmhg. There is positive Kernig sign. Fundoscopy shows papilledema. Investigations show:

| | | |
|---|---|---|
| Bilirubin | 52 µmol/L | (2-17 µmol/L) |
| ALT | 260 U/L | (8-20 U/L) |
| Serum creatinine | 120 mmol/L | (53-106 mmol/L) |
| Leukocyte count | 8 X10 9 /L | (4.0-11.0 x 10 9 /L) |
| Platelets | 60 K/mm3 | (150-450 K/mm3) |
| Neutrophils | 3 X10 9 /L | (2.5-7.5 x 10 9 /L) |
| Lymphocytes | 4 X10 9 /L | (1.5-3.5 x 10 9 /L) |
| Hemoglobin | 9 g/dL | 13.5-17.5 g/dL |
| Fasting glucose | 3.0 mmol/L | 3.5-5.5 mmol/L |
| Serum bicarbonate | 12 mmol/L | (22-28 mmol/L) |
| Fasting glucose | 3.0 mmol/L | 3.5-5.5 mmol/L |
| Serum bicarbonate | 12 mmol/L | (22-28 mmol/L) |

Brain MRI shows widespread cerebral edema. Urine dipstick shows +++ blood.

What is the most likely diagnosis?

○ **Plasmodium vivax**
○ **Toxoplasmosis**
○ **Rabies**
○ **Plasmodium falciparum**
● **Cryptococcal meningitis**

## Description

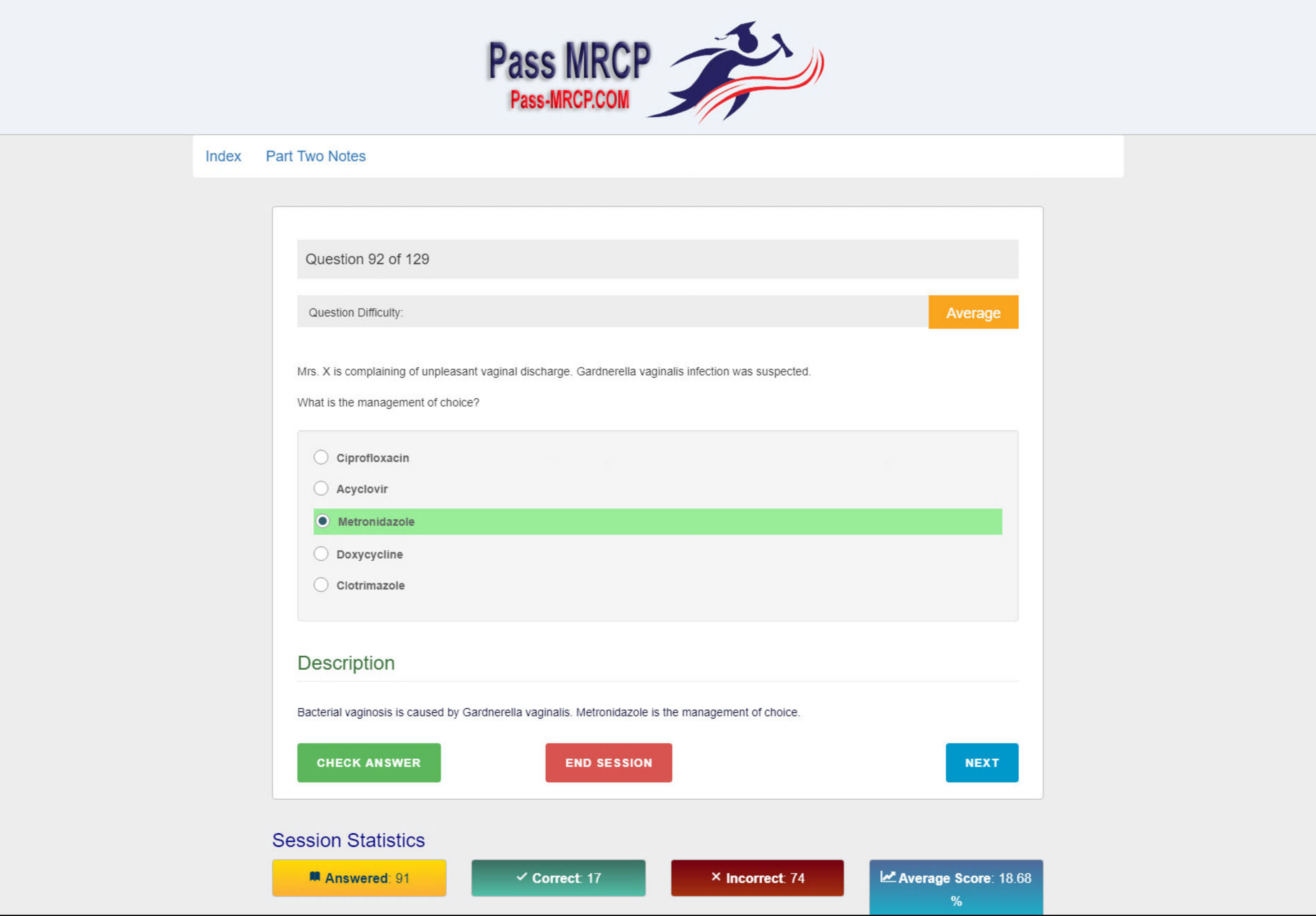
This patient is complaining of malaria. Malaria is suspected if returning travelers from endemic areas have a triad of thrombocytopenia, elevated lactate dehydrogenase (LDH) levels, and atypical lymphocytes.

Hypoglycemia, lactic acidosis and black-water fever are common manifestations of severe disease. Cerebral malaria mostly caused by P is mostly by P falciparum.

CHECK ANSWER END SESSION NEXT

## Session Statistics

**Answered**: 90 ✓ **Correct**: 17 ✕ **Incorrect**: 73 **Average Score**: 18.89 %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Part Two Notes

Question 92 of 129

Question Difficulty: Average

Mrs. X is complaining of unpleasant vaginal discharge. Gardnerella vaginalis infection was suspected.

What is the management of choice?

○ Ciprofloxacin
○ Acyclovir
● Metronidazole
○ Doxycycline
○ Clotrimazole

## Description

Bacterial vaginosis is caused by Gardnerella vaginalis. Metronidazole is the management of choice.

CHECK ANSWER
END SESSION
NEXT

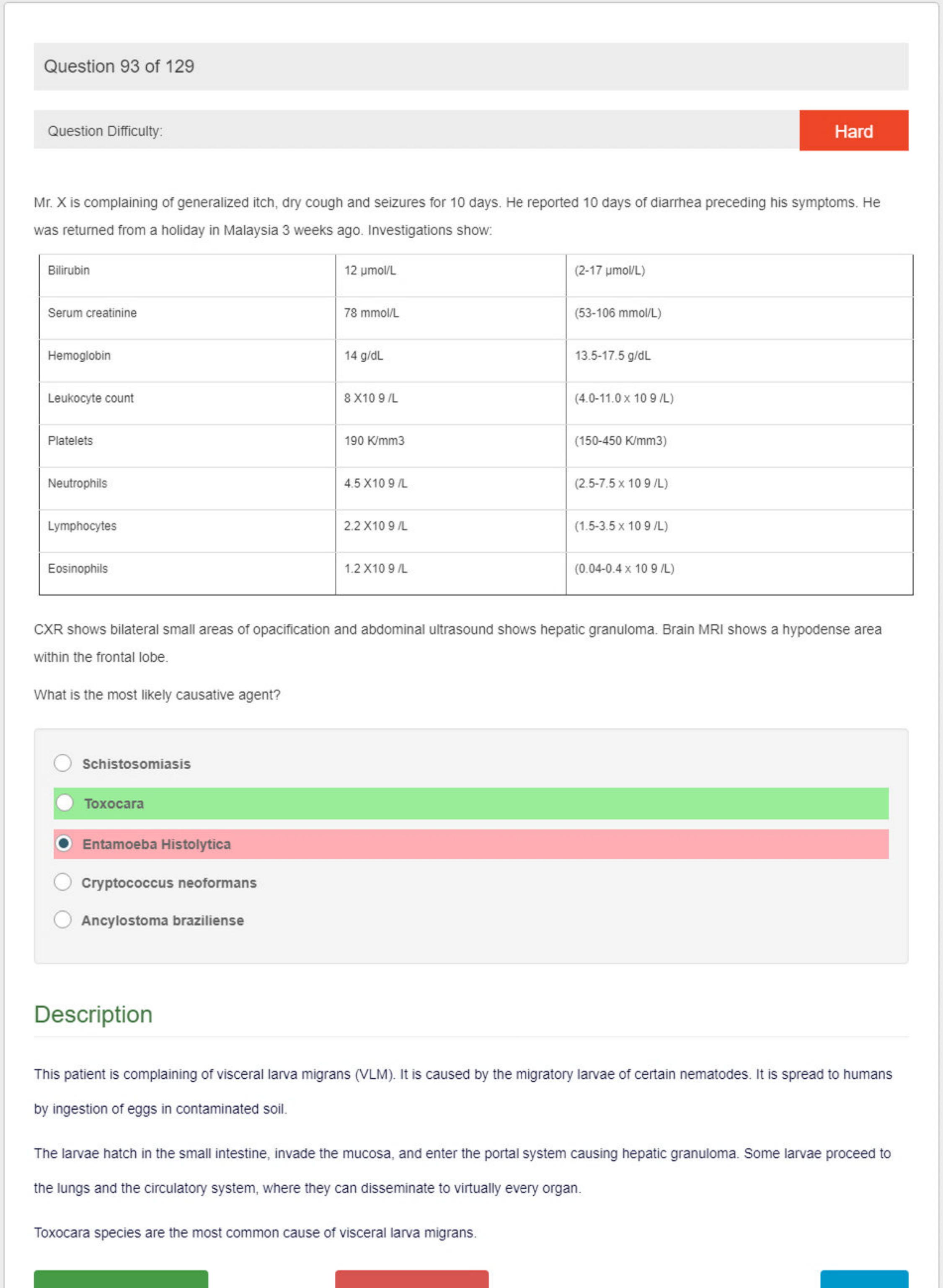
## Session Statistics

**Answered**: 91

✓ **Correct**: 17

× **Incorrect**: 74

**Average Score**: 18.68 %



Question 93 of 129

Question Difficulty: **Hard**

Mr. X is complaining of generalized itch, dry cough and seizures for 10 days. He reported 10 days of diarrhea preceding his symptoms. He was returned from a holiday in Malaysia 3 weeks ago. Investigations show:

| | | |
|---|---|---|
| Bilirubin | 12 μmol/L | (2-17 μmol/L) |
| Serum creatinine | 78 mmol/L | (53-106 mmol/L) |
| Hemoglobin | 14 g/dL | 13.5-17.5 g/dL |
| Leukocyte count | 8 X10 9 /L | (4.0-11.0 x 10 9 /L) |
| Platelets | 190 K/mm3 | (150-450 K/mm3) |
| Neutrophils | 4.5 X10 9 /L | (2.5-7.5 x 10 9 /L) |
| Lymphocytes | 2.2 X10 9 /L | (1.5-3.5 x 10 9 /L) |
| Eosinophils | 1.2 X10 9 /L | (0.04-0.4 x 10 9 /L) |

CXR shows bilateral small areas of opacification and abdominal ultrasound shows hepatic granuloma. Brain MRI shows a hypodense area within the frontal lobe.

What is the most likely causative agent?

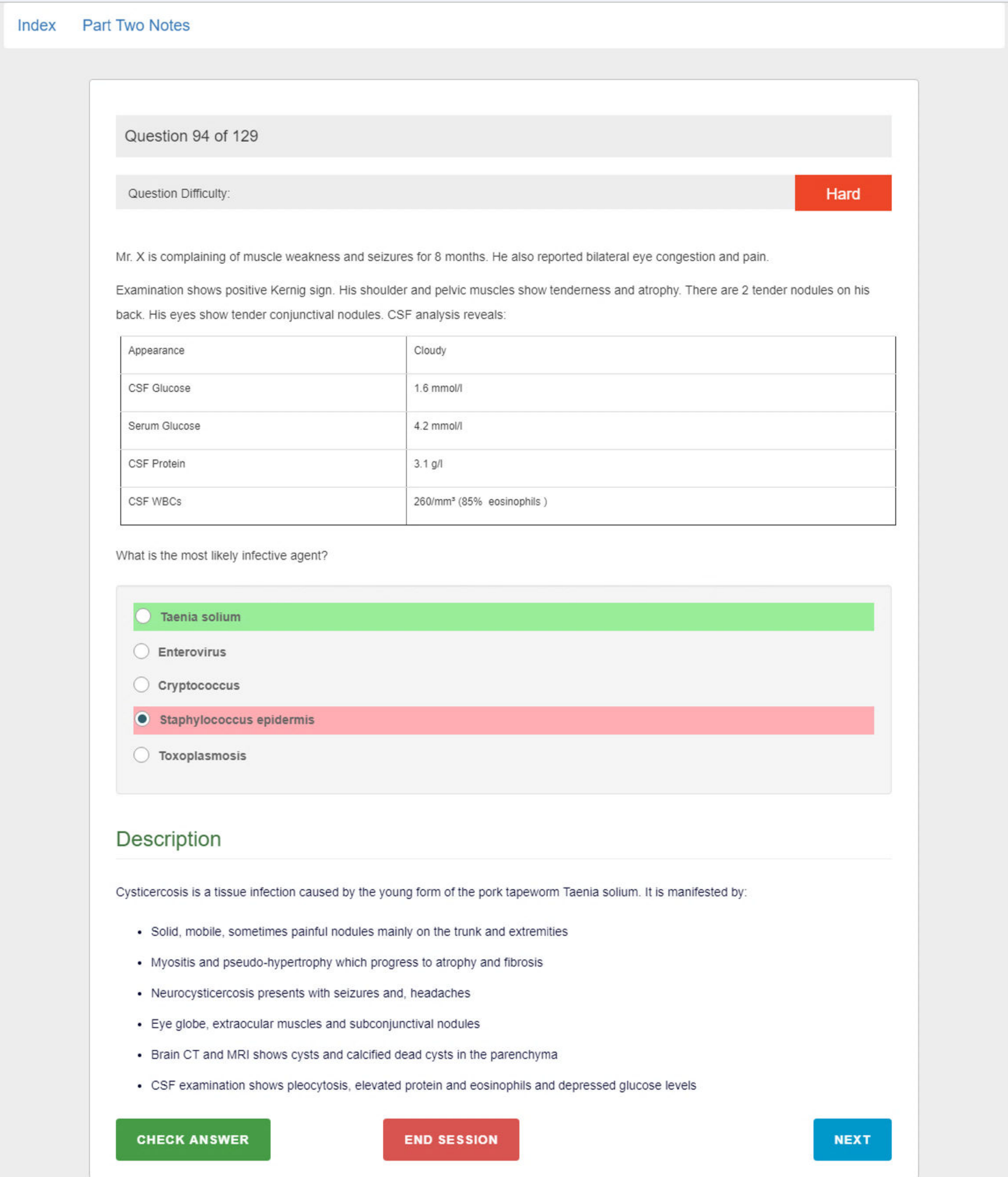
- ○ **Schistosomiasis**
- ○ **Toxocara**
- ● **Entamoeba Histolytica**
- ○ **Cryptococcus neoformans**
- ○ **Ancylostoma braziliense**

## Description

This patient is complaining of visceral larva migrans (VLM). It is caused by the migratory larvae of certain nematodes. It is spread to humans by ingestion of eggs in contaminated soil.

The larvae hatch in the small intestine, invade the mucosa, and enter the portal system causing hepatic granuloma. Some larvae proceed to the lungs and the circulatory system, where they can disseminate to virtually every organ.

Toxocara species are the most common cause of visceral larva migrans.



Question 94 of 129

Question Difficulty: Hard

Mr. X is complaining of muscle weakness and seizures for 8 months. He also reported bilateral eye congestion and pain.

Examination shows positive Kernig sign. His shoulder and pelvic muscles show tenderness and atrophy. There are 2 tender nodules on his back. His eyes show tender conjunctival nodules. CSF analysis reveals:

| | |
|---|---|
| Appearance | Cloudy |
| CSF Glucose | 1.6 mmol/l |
| Serum Glucose | 4.2 mmol/l |
| CSF Protein | 3.1 g/l |
| CSF WBCs | 260/mm³ (85% eosinophils ) |

What is the most likely infective agent?

○ **Taenia solium**

○ **Enterovirus**

○ **Cryptococcus**

● **Staphylococcus epidermis**

○ **Toxoplasmosis**

## Description

Cysticercosis is a tissue infection caused by the young form of the pork tapeworm Taenia solium. It is manifested by:

- Solid, mobile, sometimes painful nodules mainly on the trunk and extremities
- Myositis and pseudo-hypertrophy which progress to atrophy and fibrosis
- Neurocysticercosis presents with seizures and, headaches
- Eye globe, extraocular muscles and subconjunctival nodules
- Brain CT and MRI shows cysts and calcified dead cysts in the parenchyma
- CSF examination shows pleocytosis, elevated protein and eosinophils and depressed glucose levels

Question 95 of 129

Question Difficulty: **Easy**

Mr. X was admitted to the ED due to hematuria and hematemesis. He was just returned from a business trip from India. He reported 4 days of fever, myalgia and headache when he was in India.

Examination shows widespread maculopapular rash and petechiae. There are enlarged cervical and inguinal lymph nodes. Investigations show:

| | | |
|---|---|---|
| Bilirubin | 52 µmol/L | (2-17 µmol/L) |
| ALT | 120 U/L | (8-20 U/L) |
| Serum creatinine | 88 mmol/L | (53-106 mmol/L) |
| Leukocyte count | 5 X10 9 /L | (4.0-11.0 x 10 9 /L) |
| Platelets | 60 K/mm3 | (150-450 K/mm3) |
| Neutrophils | 1.5 X10 9 /L | (2.5-7.5 x 10 9 /L) |
| Lymphocytes | 1.8 X10 9 /L | (1.5-3.5 x 10 9 /L) |
| Hemoglobin | 10 g/dL | 13.5-17.5 g/dL |

What is the most likely diagnosis?

● **Japanese encephalitis**
○ **Hepatitis A**
○ **Dengue hemorrhagic fever**
○ **Yellow fever**
○ **Malaria**

## Description

Dengue is the most common arthropod-borne viral illness in humans. It is transmitted by mosquitoes of the genus Aedes, which are widely distributed in subtropical and tropical areas of the world. Dengue is manifested by:

- A prodrome of fever, chills, maculopapular rash, myalgia arthralgia and facial flushing
- Mild hemorrhagic manifestations (petechiae, bleeding gums, epistaxis, menorrhagia)
- Lymphadenopathy
- CBC shows thrombocytopenia and leukopenia
- Mild to moderate elevation of liver enzymes

Dengue hemorrhagic fever is manifested by:

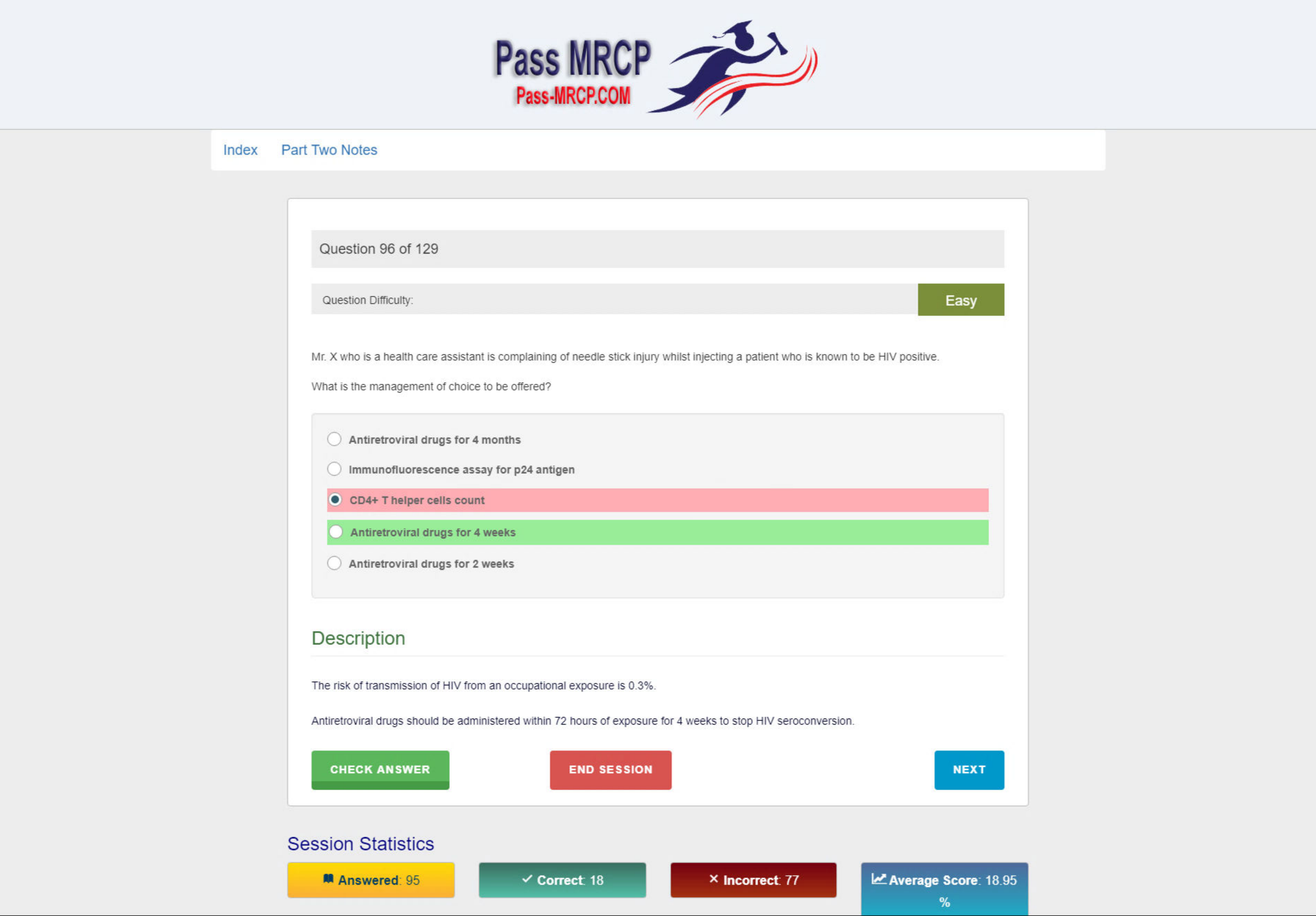
- The initial phase of dengue hemorrhagic fever is similar to that of dengue fever
- Hemorrhagic symptoms such as bleeding from sites of trauma, gastrointestinal bleeding and hematuria
- Seizures and decreased level of consciousness

Yellow fever occurs only in Africa and South America with the same manifestations and spread of Dengue.

CHECK ANSWER END SESSION NEXT

## Session Statistics

**Answered**: 94 ✓ **Correct**: 18 ✕ **Incorrect**: 76 **Average Score**: 19.15 %



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Question 96 of 129

Question Difficulty: Easy

Mr. X who is a health care assistant is complaining of needle stick injury whilst injecting a patient who is known to be HIV positive.

What is the management of choice to be offered?

○ **Antiretroviral drugs for 4 months**
○ **Immunofluorescence assay for p24 antigen**
● **CD4+ T helper cells count** 🟥
○ **Antiretroviral drugs for 4 weeks** 🟩
○ **Antiretroviral drugs for 2 weeks**

## Description

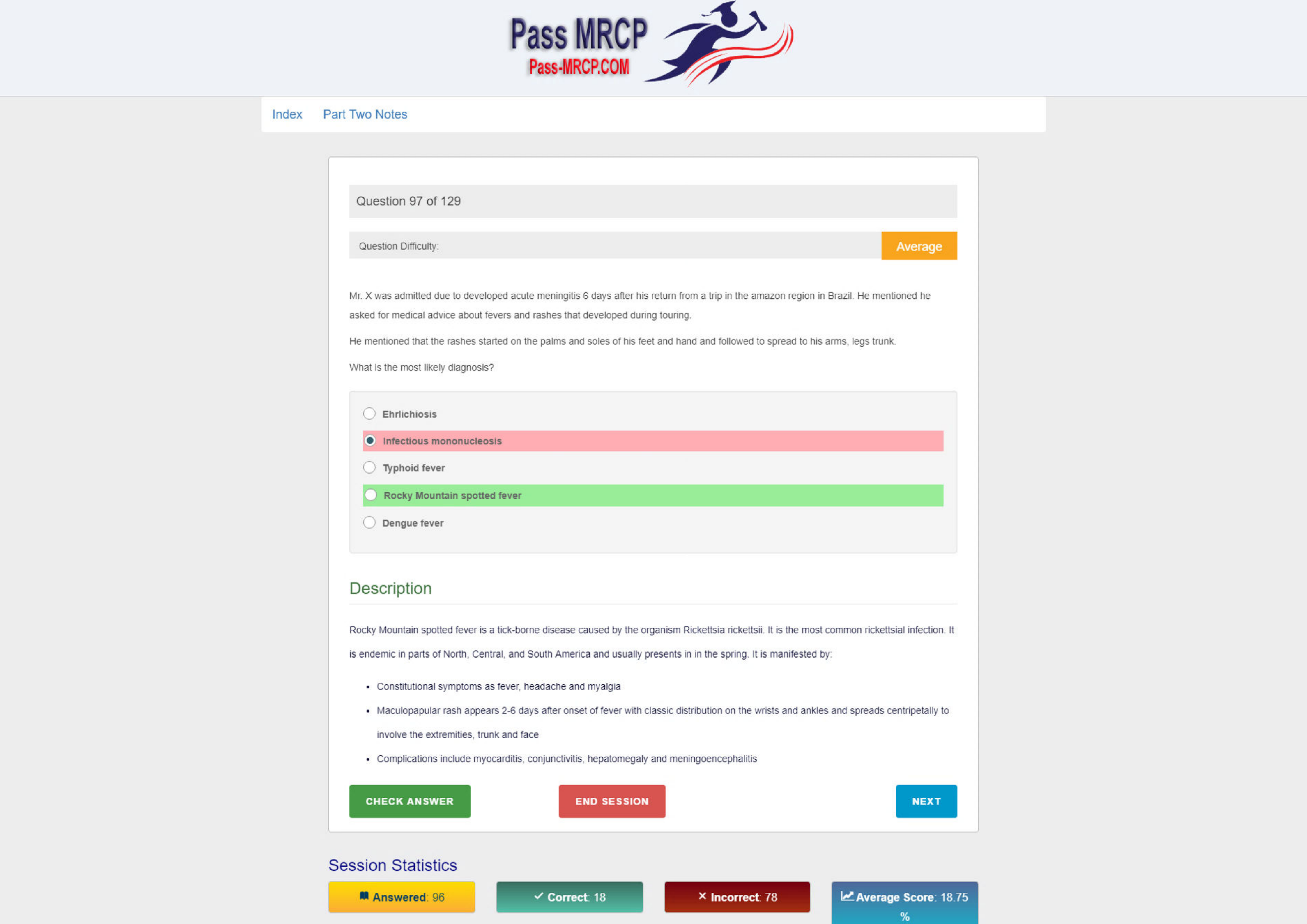
The risk of transmission of HIV from an occupational exposure is 0.3%.

Antiretroviral drugs should be administered within 72 hours of exposure for 4 weeks to stop HIV seroconversion.

CHECK ANSWER
END SESSION
NEXT

## Session Statistics

**Answered**: 95
✓ **Correct**: 18
✕ **Incorrect**: 77
**Average Score**: 18.95 %



Question 97 of 129

Question Difficulty: Average

Mr. X was admitted due to developed acute meningitis 6 days after his return from a trip in the amazon region in Brazil. He mentioned he asked for medical advice about fevers and rashes that developed during touring.

He mentioned that the rashes started on the palms and soles of his feet and hand and followed to spread to his arms, legs trunk.

What is the most likely diagnosis?

○ **Ehrlichiosis**
● **Infectious mononucleosis**
○ **Typhoid fever**
○ **Rocky Mountain spotted fever**
○ **Dengue fever**

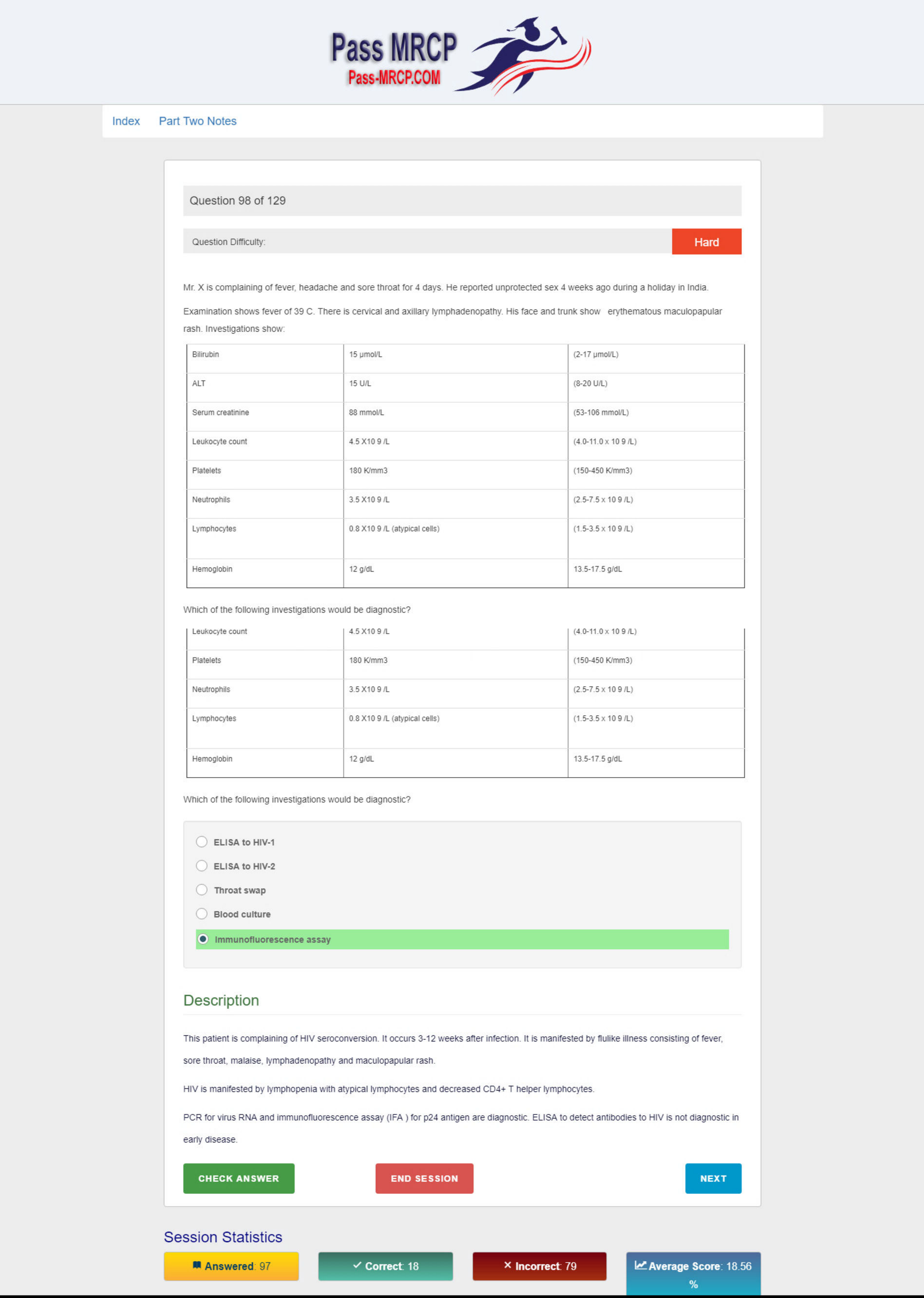
## Description

Rocky Mountain spotted fever is a tick-borne disease caused by the organism Rickettsia rickettsii. It is the most common rickettsial infection. It is endemic in parts of North, Central, and South America and usually presents in in the spring. It is manifested by:

- Constitutional symptoms as fever, headache and myalgia
- Maculopapular rash appears 2-6 days after onset of fever with classic distribution on the wrists and ankles and spreads centripetally to involve the extremities, trunk and face
- Complications include myocarditis, conjunctivitis, hepatomegaly and meningoencephalitis

## Session Statistics

**Answered**: 96
✓ **Correct**: 18
✕ **Incorrect**: 78
**Average Score**: 18.75 %



Question 98 of 129

Question Difficulty: **Hard**

Mr. X is complaining of fever, headache and sore throat for 4 days. He reported unprotected sex 4 weeks ago during a holiday in India.

Examination shows fever of 39 C. There is cervical and axillary lymphadenopathy. His face and trunk show erythematous maculopapular rash. Investigations show:

| | | |
|---|---|---|
| Bilirubin | 15 µmol/L | (2-17 µmol/L) |
| ALT | 15 U/L | (8-20 U/L) |
| Serum creatinine | 88 mmol/L | (53-106 mmol/L) |
| Leukocyte count | 4.5 X10 9 /L | (4.0-11.0 x 10 9 /L) |
| Platelets | 180 K/mm3 | (150-450 K/mm3) |
| Neutrophils | 3.5 X10 9 /L | (2.5-7.5 x 10 9 /L) |
| Lymphocytes | 0.8 X10 9 /L (atypical cells) | (1.5-3.5 x 10 9 /L) |
| Hemoglobin | 12 g/dL | 13.5-17.5 g/dL |

Which of the following investigations would be diagnostic?

| | | |
|---|---|---|
| Leukocyte count | 4.5 X10 9 /L | (4.0-11.0 x 10 9 /L) |
| Platelets | 180 K/mm3 | (150-450 K/mm3) |
| Neutrophils | 3.5 X10 9 /L | (2.5-7.5 x 10 9 /L) |
| Lymphocytes | 0.8 X10 9 /L (atypical cells) | (1.5-3.5 x 10 9 /L) |
| Hemoglobin | 12 g/dL | 13.5-17.5 g/dL |

Which of the following investigations would be diagnostic?

- ○ **ELISA to HIV-1**
- ○ **ELISA to HIV-2**
- ○ **Throat swap**
- ○ **Blood culture**
- ● **Immunofluorescence assay**

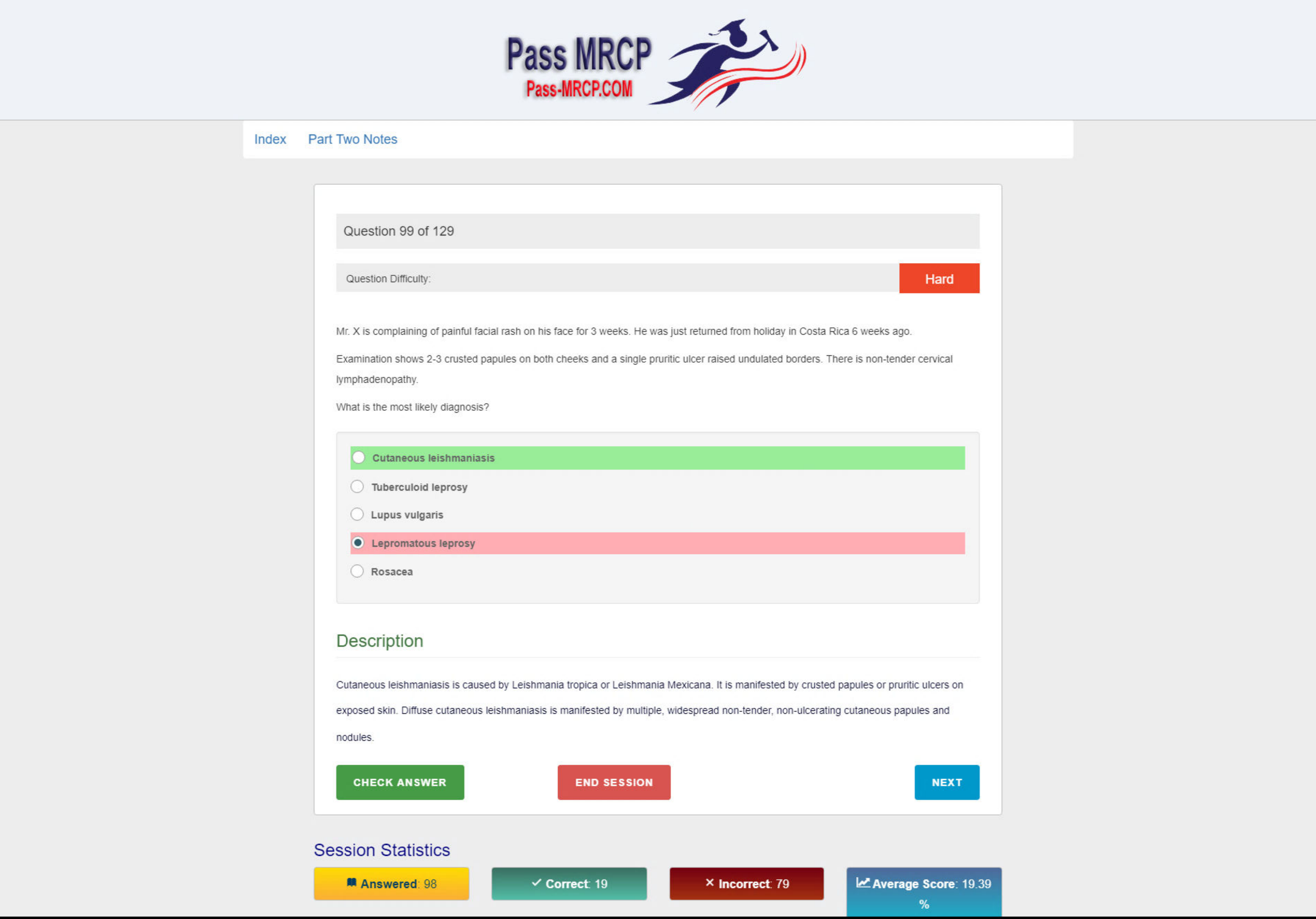
## Description

This patient is complaining of HIV seroconversion. It occurs 3-12 weeks after infection. It is manifested by flulike illness consisting of fever, sore throat, malaise, lymphadenopathy and maculopapular rash.

HIV is manifested by lymphopenia with atypical lymphocytes and decreased CD4+ T helper lymphocytes.

PCR for virus RNA and immunofluorescence assay (IFA ) for p24 antigen are diagnostic. ELISA to detect antibodies to HIV is not diagnostic in early disease.

## Session Statistics



Question 99 of 129

Question Difficulty: **Hard**

Mr. X is complaining of painful facial rash on his face for 3 weeks. He was just returned from holiday in Costa Rica 6 weeks ago.

Examination shows 2-3 crusted papules on both cheeks and a single pruritic ulcer raised undulated borders. There is non-tender cervical lymphadenopathy.

What is the most likely diagnosis?

- ○ **Cutaneous leishmaniasis** 🟩
- ○ **Tuberculoid leprosy**
- ○ **Lupus vulgaris**
- ● **Lepromatous leprosy** 🟥
- ○ **Rosacea**

## Description

Cutaneous leishmaniasis is caused by Leishmania tropica or Leishmania Mexicana. It is manifested by crusted papules or pruritic ulcers on exposed skin. Diffuse cutaneous leishmaniasis is manifested by multiple, widespread non-tender, non-ulcerating cutaneous papules and nodules.

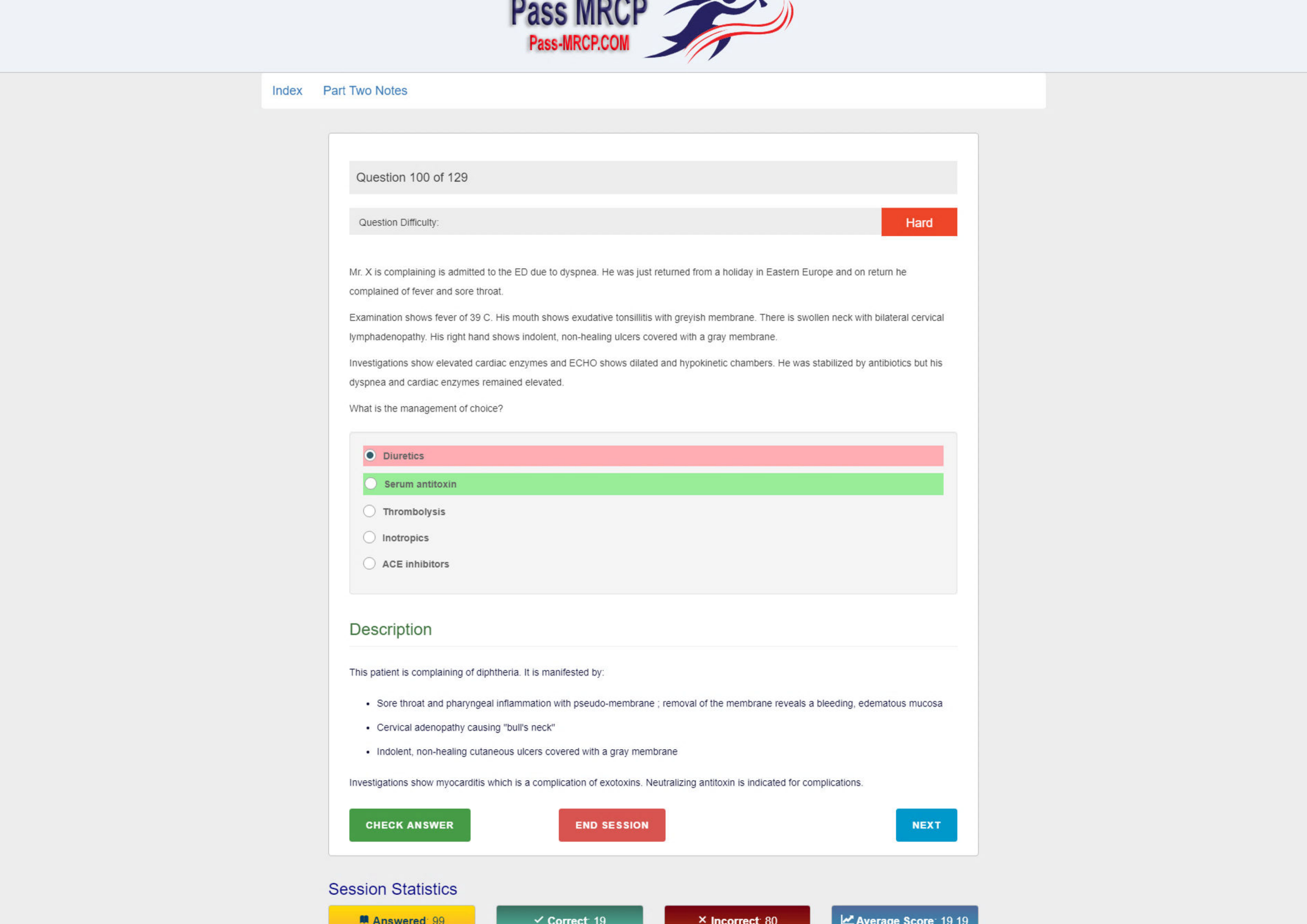
## Session Statistics

**Answered**: 98

✓ **Correct**: 19

× **Incorrect**: 79

**Average Score**: 19.39 %



Question 100 of 129

Question Difficulty: Hard

Mr. X is complaining is admitted to the ED due to dyspnea. He was just returned from a holiday in Eastern Europe and on return he complained of fever and sore throat.

Examination shows fever of 39 C. His mouth shows exudative tonsillitis with greyish membrane. There is swollen neck with bilateral cervical lymphadenopathy. His right hand shows indolent, non-healing ulcers covered with a gray membrane.

Investigations show elevated cardiac enzymes and ECHO shows dilated and hypokinetic chambers. He was stabilized by antibiotics but his dyspnea and cardiac enzymes remained elevated.

What is the management of choice?

● Diuretics

○ Serum antitoxin

○ Thrombolysis

○ Inotropics

○ ACE inhibitors

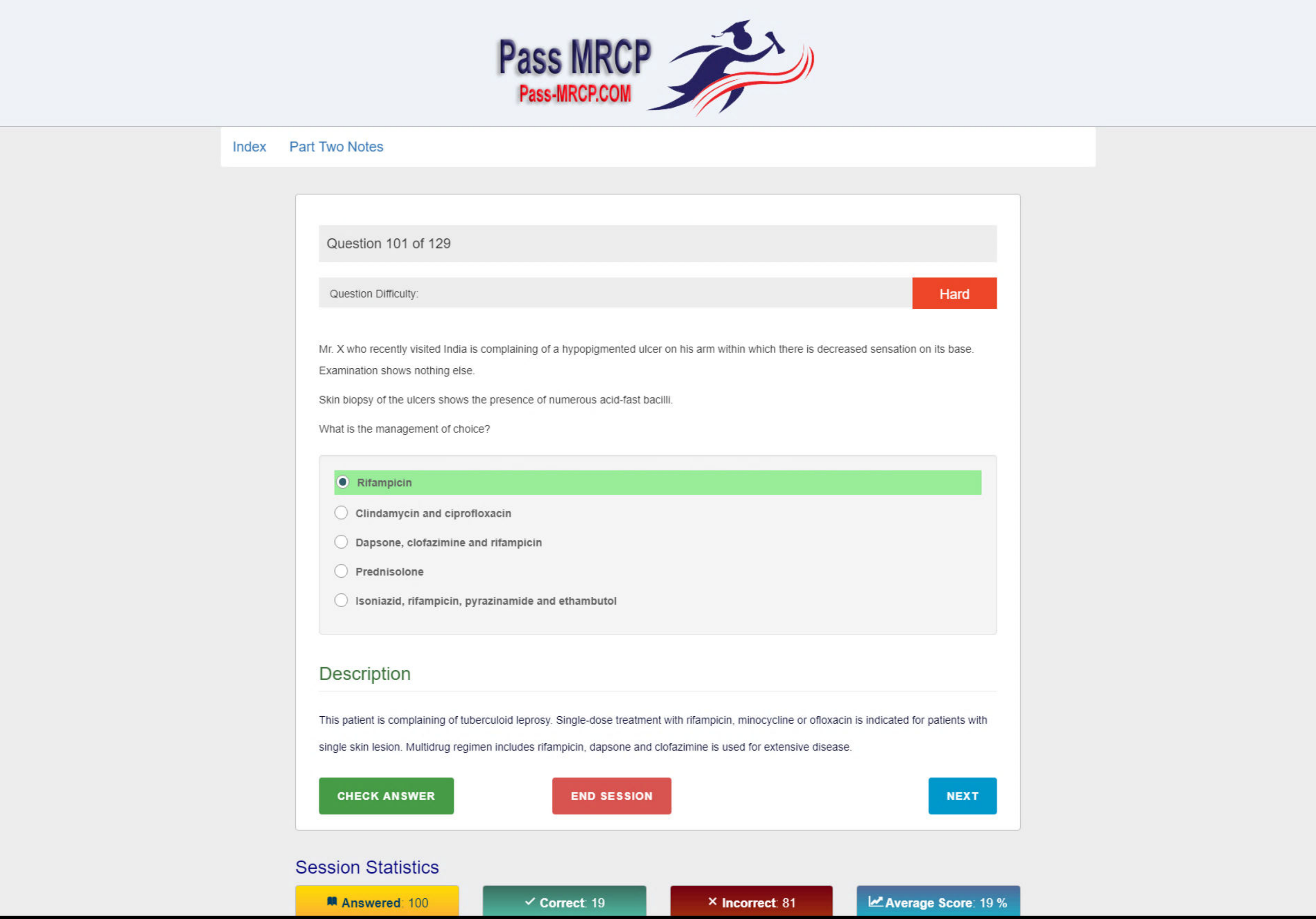
## Description

This patient is complaining of diphtheria. It is manifested by:

- Sore throat and pharyngeal inflammation with pseudo-membrane ; removal of the membrane reveals a bleeding, edematous mucosa
- Cervical adenopathy causing "bull's neck"
- Indolent, non-healing cutaneous ulcers covered with a gray membrane

Investigations show myocarditis which is a complication of exotoxins. Neutralizing antitoxin is indicated for complications.

Session Statistics



Question 101 of 129

Question Difficulty: Hard

Mr. X who recently visited India is complaining of a hypopigmented ulcer on his arm within which there is decreased sensation on its base. Examination shows nothing else.

Skin biopsy of the ulcers shows the presence of numerous acid-fast bacilli.

What is the management of choice?

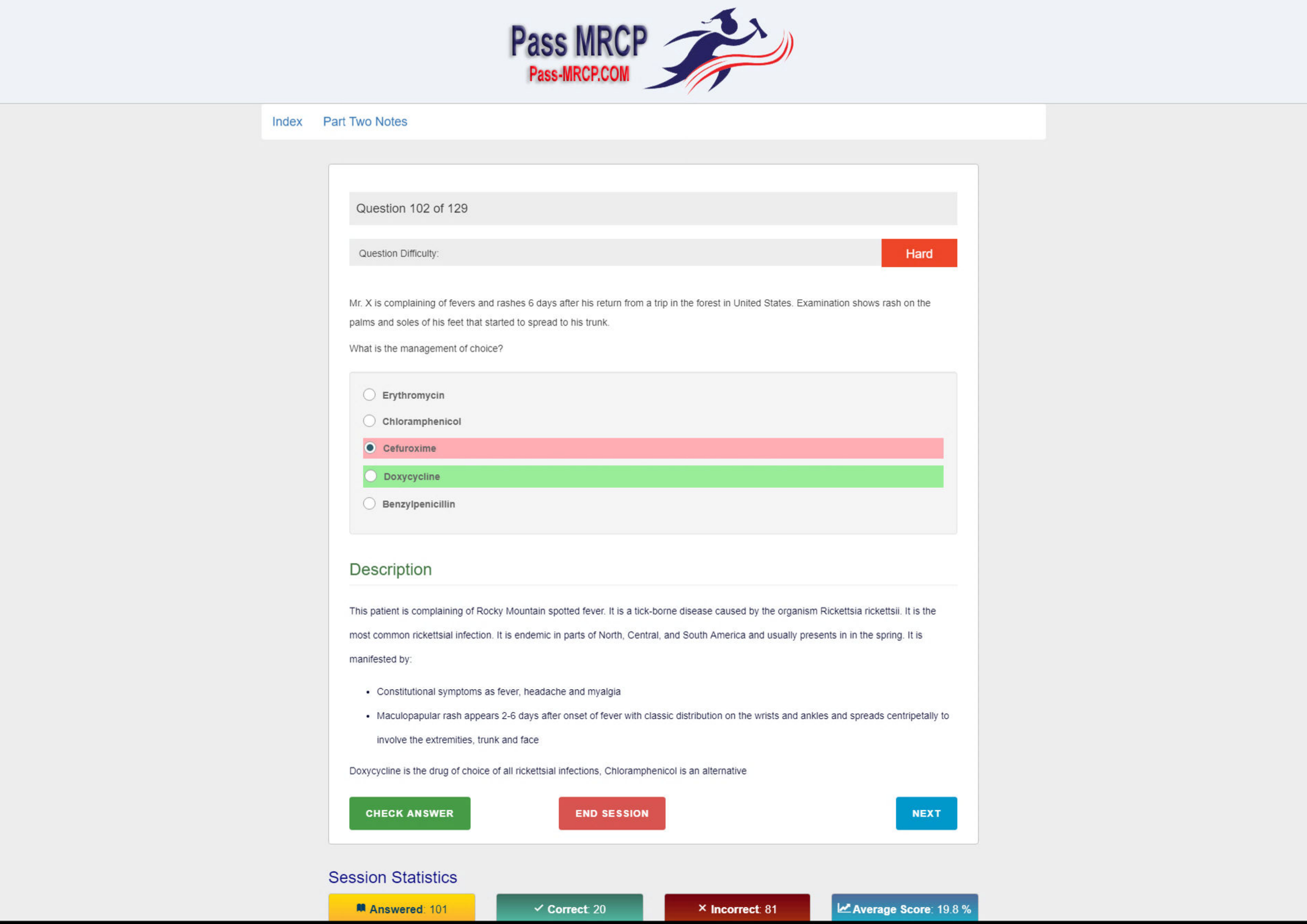
- ● **Rifampicin**
- ○ **Clindamycin and ciprofloxacin**
- ○ **Dapsone, clofazimine and rifampicin**
- ○ **Prednisolone**
- ○ **Isoniazid, rifampicin, pyrazinamide and ethambutol**

## Description

This patient is complaining of tuberculoid leprosy. Single-dose treatment with rifampicin, minocycline or ofloxacin is indicated for patients with single skin lesion. Multidrug regimen includes rifampicin, dapsone and clofazimine is used for extensive disease.

## Session Statistics

**Answered**: 100
✓ **Correct**: 19
✕ **Incorrect**: 81
**Average Score**: 19 %



Question 102 of 129

Question Difficulty: **Hard**

Mr. X is complaining of fevers and rashes 6 days after his return from a trip in the forest in United States. Examination shows rash on the palms and soles of his feet that started to spread to his trunk.

What is the management of choice?

○ **Erythromycin**
○ **Chloramphenicol**
● **Cefuroxime**
○ **Doxycycline**
○ **Benzylpenicillin**

## Description

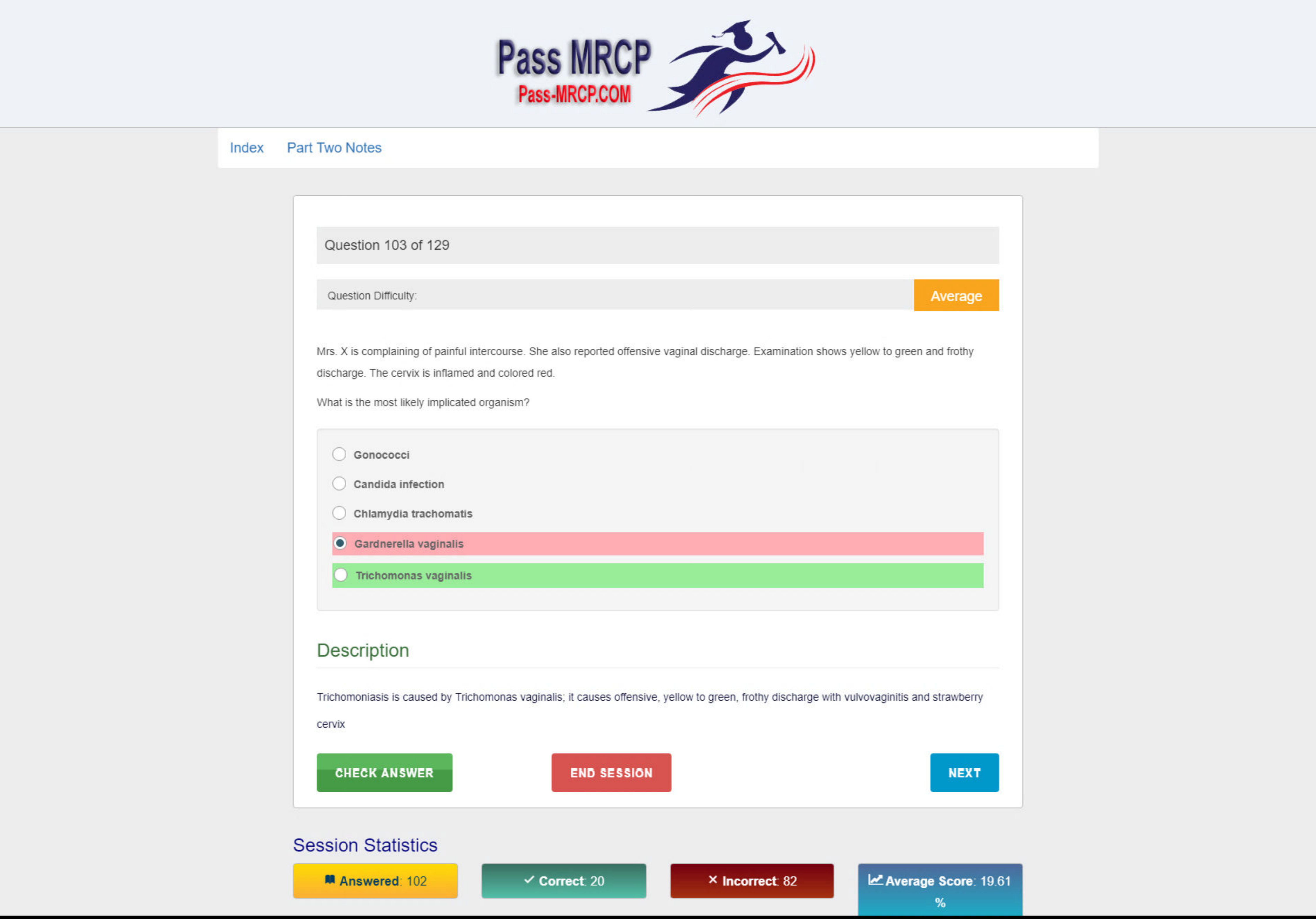
This patient is complaining of Rocky Mountain spotted fever. It is a tick-borne disease caused by the organism Rickettsia rickettsii. It is the most common rickettsial infection. It is endemic in parts of North, Central, and South America and usually presents in in the spring. It is manifested by:

- Constitutional symptoms as fever, headache and myalgia
- Maculopapular rash appears 2-6 days after onset of fever with classic distribution on the wrists and ankles and spreads centripetally to involve the extremities, trunk and face

Doxycycline is the drug of choice of all rickettsial infections, Chloramphenicol is an alternative

Session Statistics

**Answered**: 101
**Correct**: 20
**Incorrect**: 81
**Average Score**: 19.8 %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Question Difficulty: Average

Mrs. X is complaining of painful intercourse. She also reported offensive vaginal discharge. Examination shows yellow to green and frothy discharge. The cervix is inflamed and colored red.

What is the most likely implicated organism?

- ○ **Gonococci**
- ○ **Candida infection**
- ○ **Chlamydia trachomatis**
- ● **Gardnerella vaginalis**
- ○ **Trichomonas vaginalis**

## Description

Trichomoniasis is caused by Trichomonas vaginalis; it causes offensive, yellow to green, frothy discharge with vulvovaginitis and strawberry cervix

CHECK ANSWER
END SESSION
NEXT

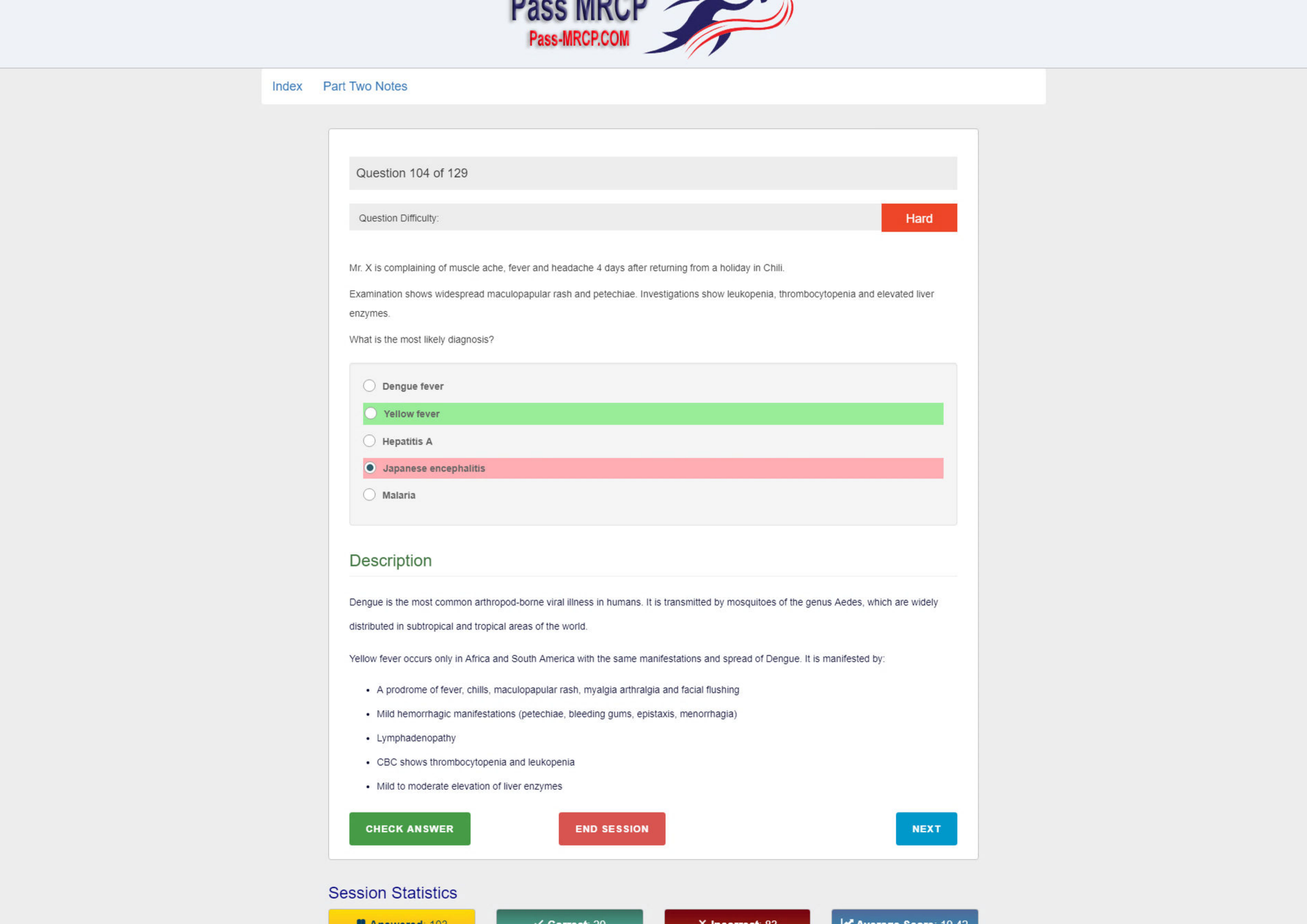
## Session Statistics

**Answered**: 102

✓ **Correct**: 20

× **Incorrect**: 82

**Average Score**: 19.61 %



Question 104 of 129

Question Difficulty: **Hard**

Mr. X is complaining of muscle ache, fever and headache 4 days after returning from a holiday in Chili.

Examination shows widespread maculopapular rash and petechiae. Investigations show leukopenia, thrombocytopenia and elevated liver enzymes.

What is the most likely diagnosis?

○ **Dengue fever**

○ **Yellow fever**

○ **Hepatitis A**

● **Japanese encephalitis**

○ **Malaria**

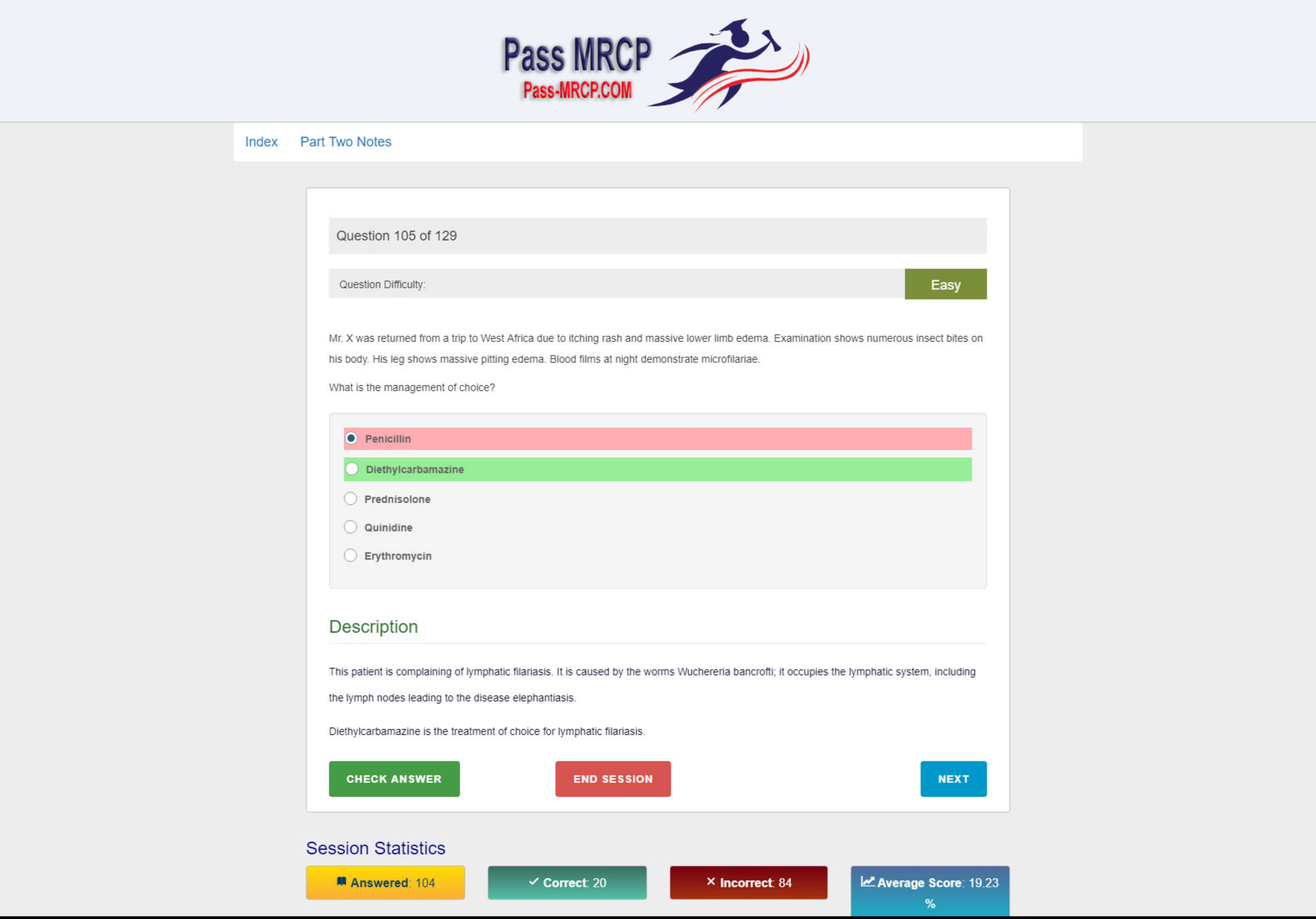
## Description

Dengue is the most common arthropod-borne viral illness in humans. It is transmitted by mosquitoes of the genus Aedes, which are widely distributed in subtropical and tropical areas of the world.

Yellow fever occurs only in Africa and South America with the same manifestations and spread of Dengue. It is manifested by:

- A prodrome of fever, chills, maculopapular rash, myalgia arthralgia and facial flushing
- Mild hemorrhagic manifestations (petechiae, bleeding gums, epistaxis, menorrhagia)
- Lymphadenopathy
- CBC shows thrombocytopenia and leukopenia
- Mild to moderate elevation of liver enzymes

Session Statistics



Question 105 of 129

Question Difficulty: **Easy**

Mr. X was returned from a trip to West Africa due to itching rash and massive lower limb edema. Examination shows numerous insect bites on his body. His leg shows massive pitting edema. Blood films at night demonstrate microfilariae.

What is the management of choice?

- ● **Penicillin**
- ○ **Diethylcarbamazine**
- ○ **Prednisolone**
- ○ **Quinidine**
- ○ **Erythromycin**

## Description

This patient is complaining of lymphatic filariasis. It is caused by the worms Wuchereria bancrofti; it occupies the lymphatic system, including the lymph nodes leading to the disease elephantiasis.

Diethylcarbamazine is the treatment of choice for lymphatic filariasis.

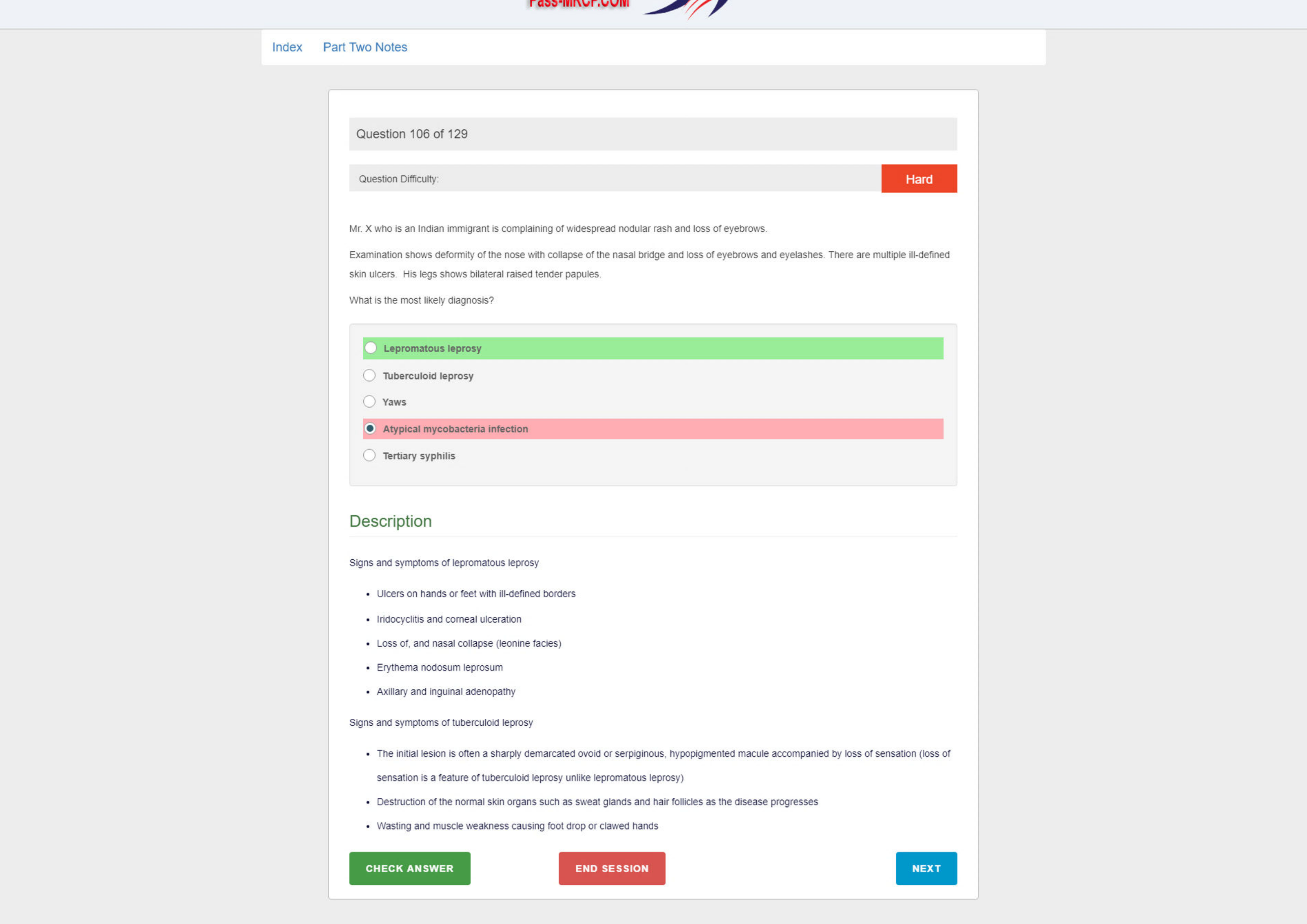
Session Statistics

**Answered**: 104

✓ **Correct**: 20

✕ **Incorrect**: 84

**Average Score**: 19.23 %



Question 106 of 129

Question Difficulty: Hard

Mr. X who is an Indian immigrant is complaining of widespread nodular rash and loss of eyebrows.

Examination shows deformity of the nose with collapse of the nasal bridge and loss of eyebrows and eyelashes. There are multiple ill-defined skin ulcers. His legs shows bilateral raised tender papules.

What is the most likely diagnosis?

○ **Lepromatous leprosy**
○ **Tuberculoid leprosy**
○ **Yaws**
● **Atypical mycobacteria infection**
○ **Tertiary syphilis**

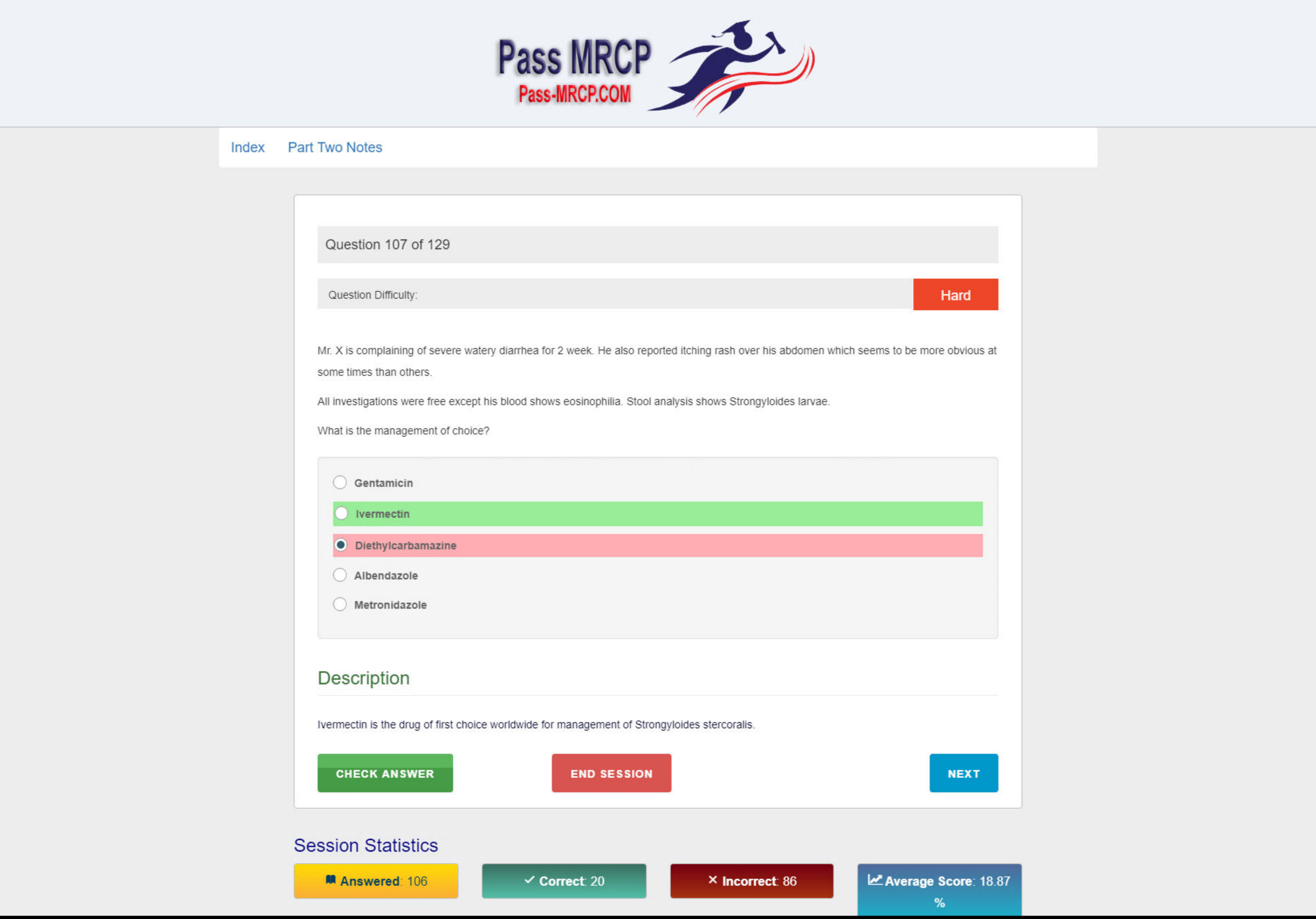
## Description

Signs and symptoms of lepromatous leprosy

- Ulcers on hands or feet with ill-defined borders
- Iridocyclitis and corneal ulceration
- Loss of, and nasal collapse (leonine facies)
- Erythema nodosum leprosum
- Axillary and inguinal adenopathy

Signs and symptoms of tuberculoid leprosy

- The initial lesion is often a sharply demarcated ovoid or serpiginous, hypopigmented macule accompanied by loss of sensation (loss of sensation is a feature of tuberculoid leprosy unlike lepromatous leprosy)
- Destruction of the normal skin organs such as sweat glands and hair follicles as the disease progresses
- Wasting and muscle weakness causing foot drop or clawed hands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Question Difficulty: Hard

Mr. X is complaining of severe watery diarrhea for 2 week. He also reported itching rash over his abdomen which seems to be more obvious at some times than others.

All investigations were free except his blood shows eosinophilia. Stool analysis shows Strongyloides larvae.

What is the management of choice?

- ○ Gentamicin
- ○ Ivermectin
- ● Diethylcarbamazine
- ○ Albendazole
- ○ Metronidazole

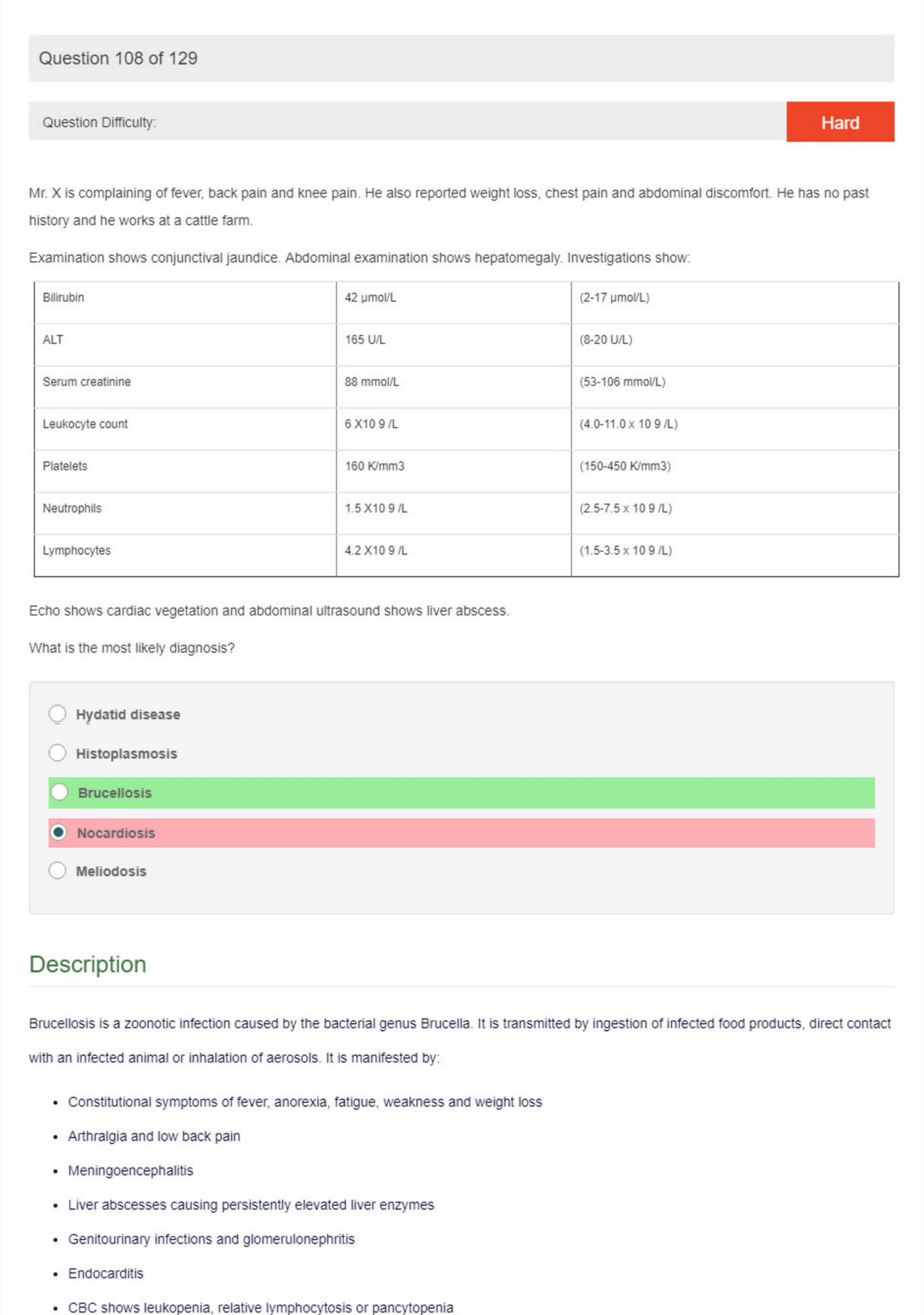
## Description

Ivermectin is the drug of first choice worldwide for management of Strongyloides stercoralis.

CHECK ANSWER
END SESSION
NEXT

## Session Statistics

**Answered**: 106
✓ **Correct**: 20
✕ **Incorrect**: 86
**Average Score**: 18.87 %



Question 108 of 129

Question Difficulty: **Hard**

Mr. X is complaining of fever, back pain and knee pain. He also reported weight loss, chest pain and abdominal discomfort. He has no past history and he works at a cattle farm.

Examination shows conjunctival jaundice. Abdominal examination shows hepatomegaly. Investigations show:

| | | |
|---|---|---|
| Bilirubin | 42 µmol/L | (2-17 µmol/L) |
| ALT | 165 U/L | (8-20 U/L) |
| Serum creatinine | 88 mmol/L | (53-106 mmol/L) |
| Leukocyte count | 6 X10 9 /L | (4.0-11.0 x 10 9 /L) |
| Platelets | 160 K/mm3 | (150-450 K/mm3) |
| Neutrophils | 1.5 X10 9 /L | (2.5-7.5 x 10 9 /L) |
| Lymphocytes | 4.2 X10 9 /L | (1.5-3.5 x 10 9 /L) |

Echo shows cardiac vegetation and abdominal ultrasound shows liver abscess.

What is the most likely diagnosis?

○ **Hydatid disease**

○ **Histoplasmosis**

○ **Brucellosis** 🟩

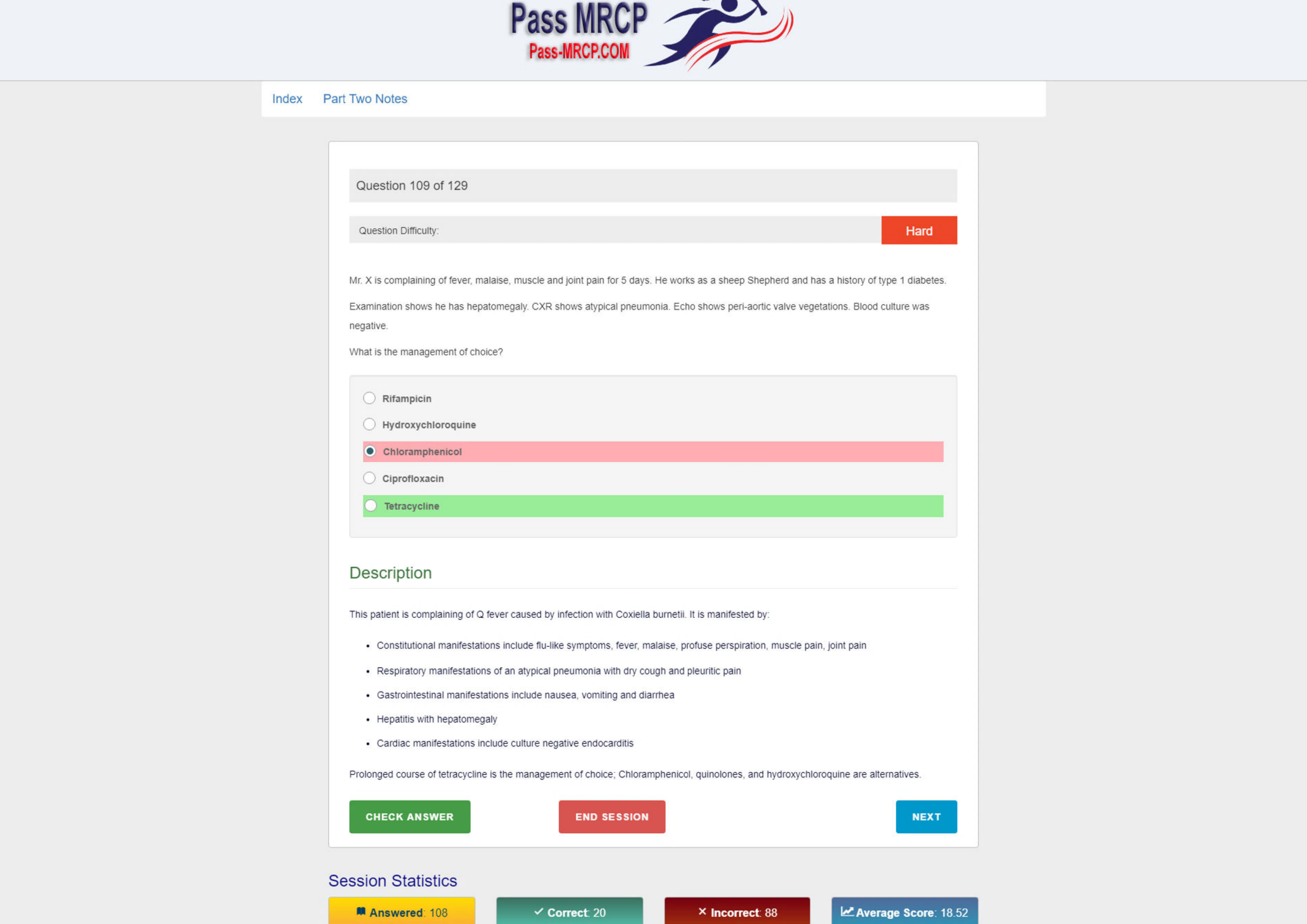
● **Nocardiosis** 🟥

○ **Meliodosis**

## Description

Brucellosis is a zoonotic infection caused by the bacterial genus Brucella. It is transmitted by ingestion of infected food products, direct contact with an infected animal or inhalation of aerosols. It is manifested by:

- Constitutional symptoms of fever, anorexia, fatigue, weakness and weight loss
- Arthralgia and low back pain
- Meningoencephalitis
- Liver abscesses causing persistently elevated liver enzymes
- Genitourinary infections and glomerulonephritis
- Endocarditis
- CBC shows leukopenia, relative lymphocytosis or pancytopenia



Question 109 of 129

Question Difficulty: Hard

Mr. X is complaining of fever, malaise, muscle and joint pain for 5 days. He works as a sheep Shepherd and has a history of type 1 diabetes.

Examination shows he has hepatomegaly. CXR shows atypical pneumonia. Echo shows peri-aortic valve vegetations. Blood culture was negative.

What is the management of choice?

○ **Rifampicin**

○ **Hydroxychloroquine**

● **Chloramphenicol**

○ **Ciprofloxacin**

○ **Tetracycline**

## Description

This patient is complaining of Q fever caused by infection with Coxiella burnetii. It is manifested by:

- Constitutional manifestations include flu-like symptoms, fever, malaise, profuse perspiration, muscle pain, joint pain
- Respiratory manifestations of an atypical pneumonia with dry cough and pleuritic pain
- Gastrointestinal manifestations include nausea, vomiting and diarrhea
- Hepatitis with hepatomegaly
- Cardiac manifestations include culture negative endocarditis

Prolonged course of tetracycline is the management of choice; Chloramphenicol, quinolones, and hydroxychloroquine are alternatives.

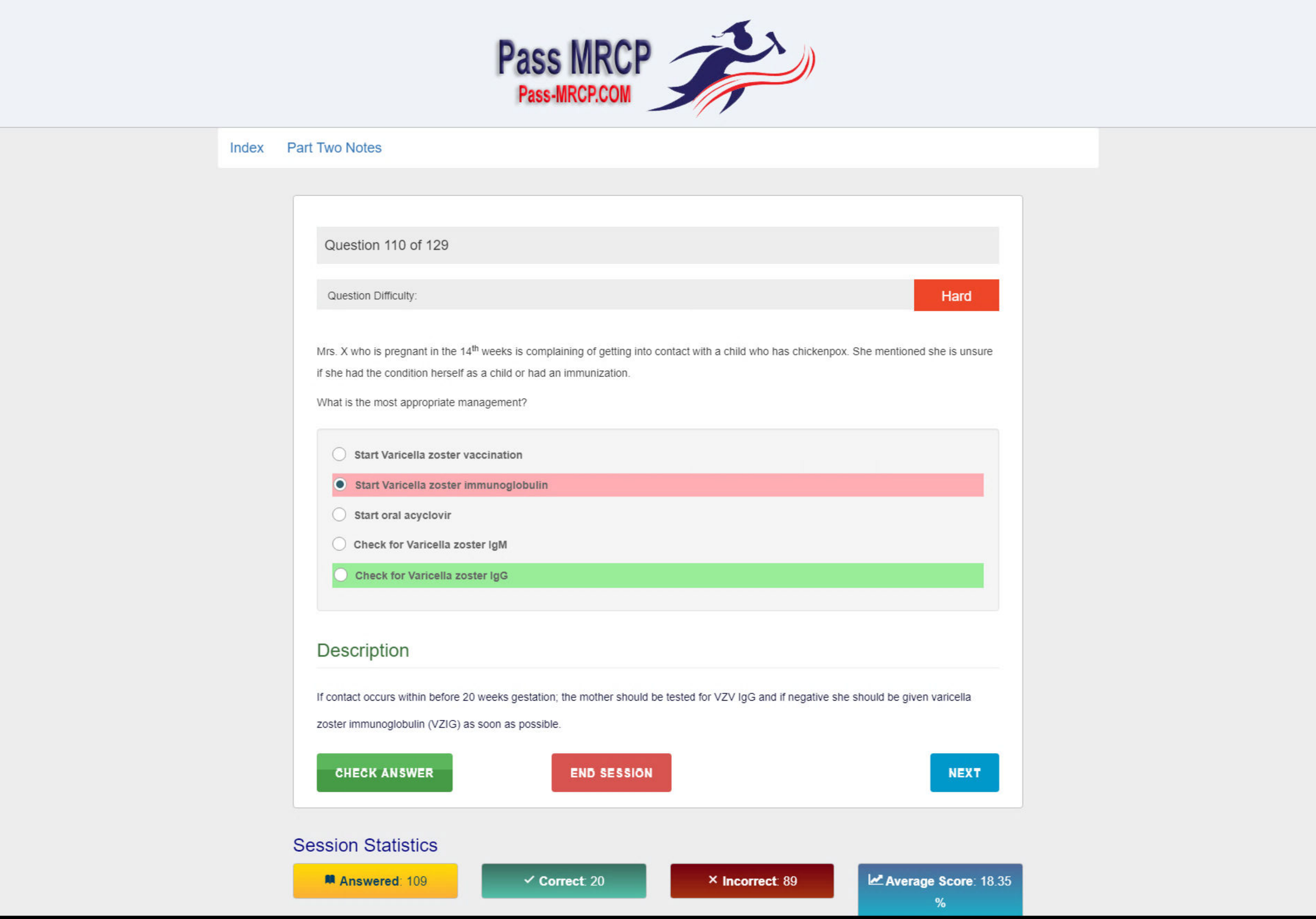
## Session Statistics

**Answered**: 108

✓ **Correct**: 20

✕ **Incorrect**: 88

**Average Score**: 18.52



Question 110 of 129

Question Difficulty: Hard

Mrs. X who is pregnant in the 14th weeks is complaining of getting into contact with a child who has chickenpox. She mentioned she is unsure if she had the condition herself as a child or had an immunization.

What is the most appropriate management?

- ○ Start Varicella zoster vaccination
- ● Start Varicella zoster immunoglobulin
- ○ Start oral acyclovir
- ○ Check for Varicella zoster IgM
- ○ Check for Varicella zoster IgG

## Description

If contact occurs within before 20 weeks gestation; the mother should be tested for VZV IgG and if negative she should be given varicella zoster immunoglobulin (VZIG) as soon as possible.

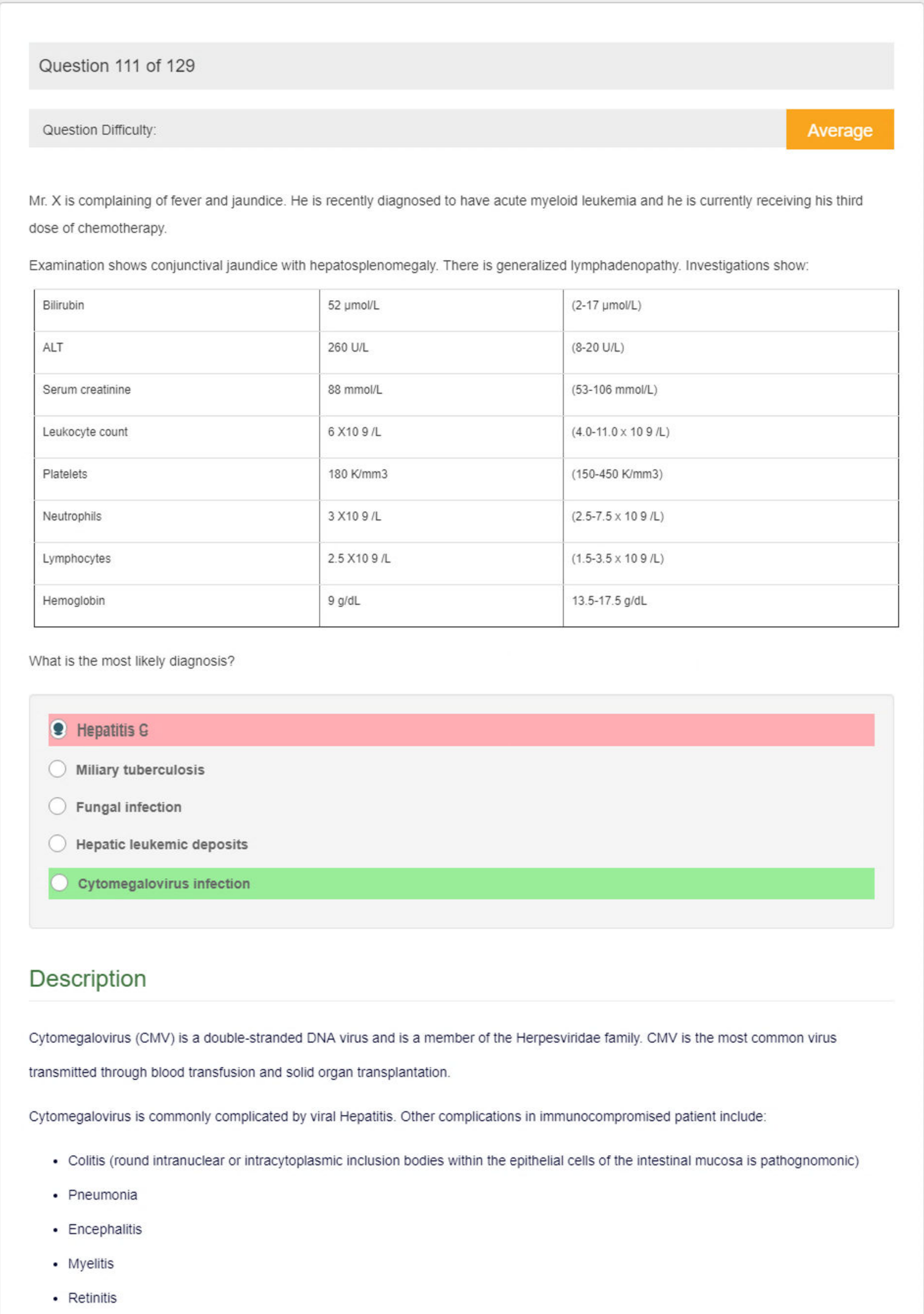
## Session Statistics

Answered: 109

✓ Correct: 20

× Incorrect: 89

Average Score: 18.35 %



Question 111 of 129

Question Difficulty: **Average**

Mr. X is complaining of fever and jaundice. He is recently diagnosed to have acute myeloid leukemia and he is currently receiving his third dose of chemotherapy.

Examination shows conjunctival jaundice with hepatosplenomegaly. There is generalized lymphadenopathy. Investigations show:

| | | |
|---|---|---|
| Bilirubin | 52 µmol/L | (2-17 µmol/L) |
| ALT | 260 U/L | (8-20 U/L) |
| Serum creatinine | 88 mmol/L | (53-106 mmol/L) |
| Leukocyte count | 6 X10 9 /L | (4.0-11.0 x 10 9 /L) |
| Platelets | 180 K/mm3 | (150-450 K/mm3) |
| Neutrophils | 3 X10 9 /L | (2.5-7.5 x 10 9 /L) |
| Lymphocytes | 2.5 X10 9 /L | (1.5-3.5 x 10 9 /L) |
| Hemoglobin | 9 g/dL | 13.5-17.5 g/dL |

What is the most likely diagnosis?

● **Hepatitis G**

○ **Miliary tuberculosis**

○ **Fungal infection**

○ **Hepatic leukemic deposits**

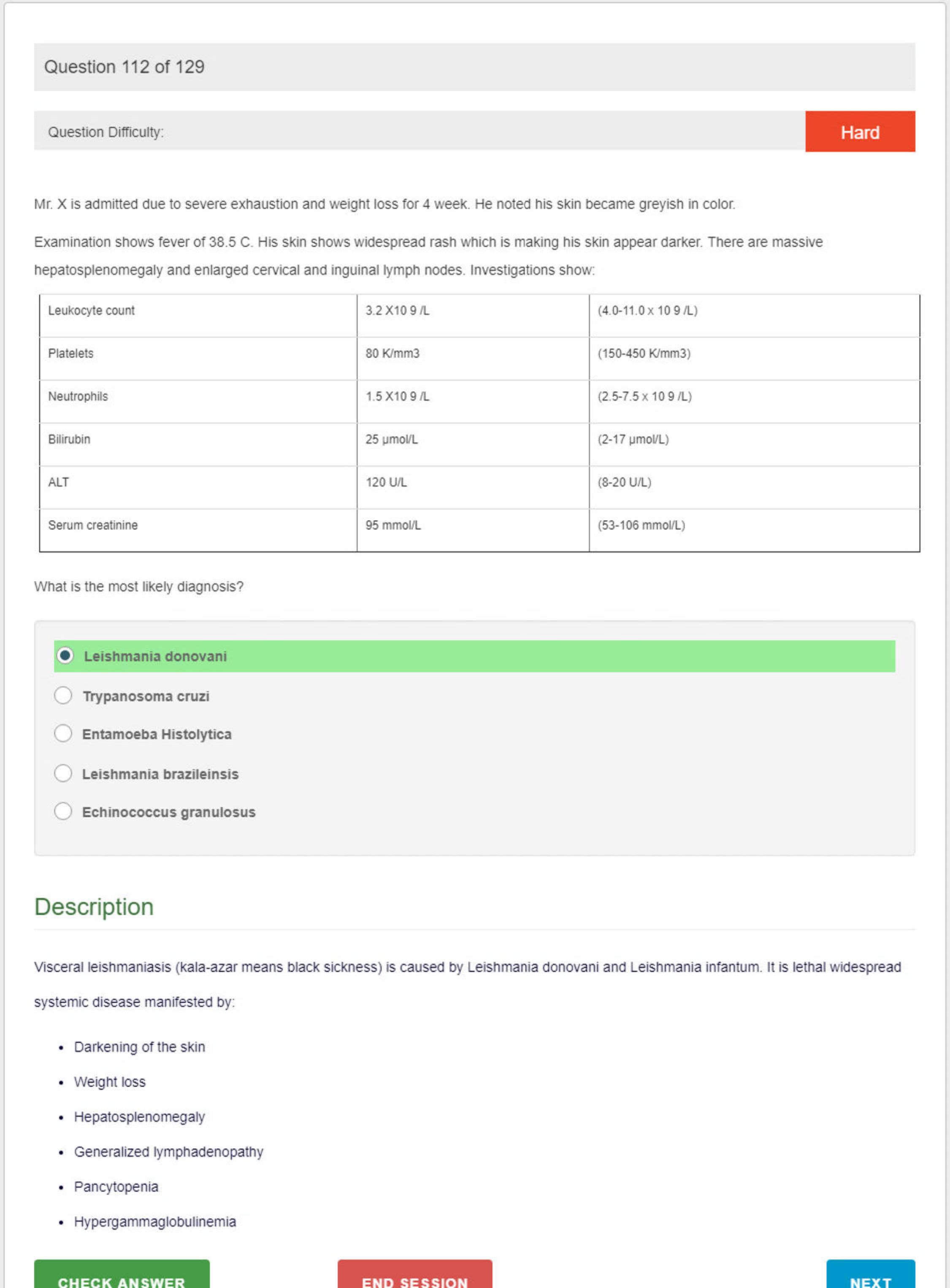
○ **Cytomegalovirus infection**

## Description

Cytomegalovirus (CMV) is a double-stranded DNA virus and is a member of the Herpesviridae family. CMV is the most common virus transmitted through blood transfusion and solid organ transplantation.

Cytomegalovirus is commonly complicated by viral Hepatitis. Other complications in immunocompromised patient include:

- Colitis (round intranuclear or intracytoplasmic inclusion bodies within the epithelial cells of the intestinal mucosa is pathognomonic)
- Pneumonia
- Encephalitis
- Myelitis
- Retinitis



Mr. X is admitted due to severe exhaustion and weight loss for 4 week. He noted his skin became greyish in color.

Examination shows fever of 38.5 C. His skin shows widespread rash which is making his skin appear darker. There are massive hepatosplenomegaly and enlarged cervical and inguinal lymph nodes. Investigations show:

| | | |
|---|---|---|
| Leukocyte count | 3.2 X10 9 /L | (4.0-11.0 x 10 9 /L) |
| Platelets | 80 K/mm3 | (150-450 K/mm3) |
| Neutrophils | 1.5 X10 9 /L | (2.5-7.5 x 10 9 /L) |
| Bilirubin | 25 µmol/L | (2-17 µmol/L) |
| ALT | 120 U/L | (8-20 U/L) |
| Serum creatinine | 95 mmol/L | (53-106 mmol/L) |

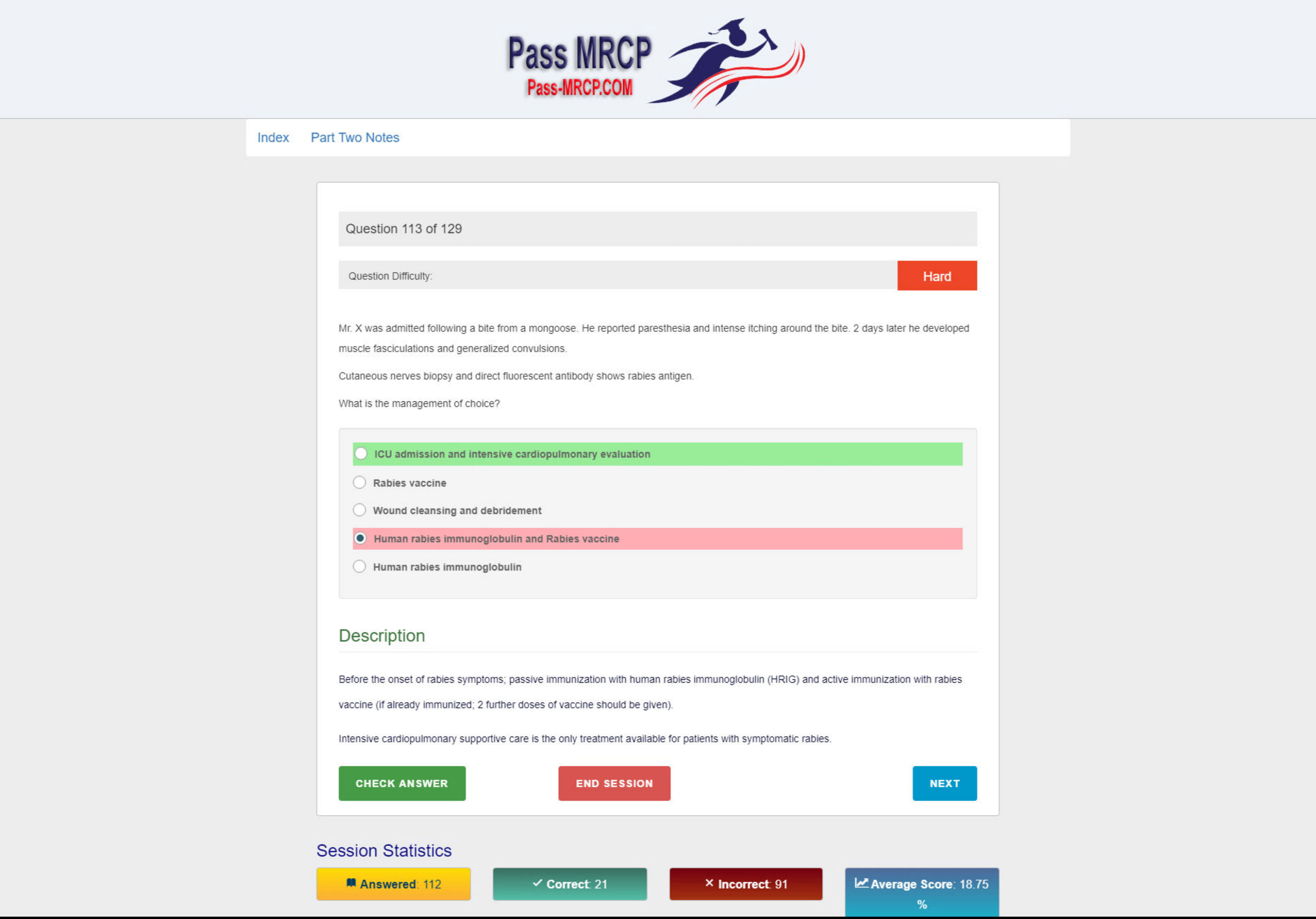
What is the most likely diagnosis?

● **Leishmania donovani**
○ **Trypanosoma cruzi**
○ **Entamoeba Histolytica**
○ **Leishmania brazileinsis**
○ **Echinococcus granulosus**

## Description

Visceral leishmaniasis (kala-azar means black sickness) is caused by Leishmania donovani and Leishmania infantum. It is lethal widespread systemic disease manifested by:

- Darkening of the skin
- Weight loss
- Hepatosplenomegaly
- Generalized lymphadenopathy
- Pancytopenia
- Hypergammaglobulinemia



Question 113 of 129

Question Difficulty: Hard

Mr. X was admitted following a bite from a mongoose. He reported paresthesia and intense itching around the bite. 2 days later he developed muscle fasciculations and generalized convulsions.

Cutaneous nerves biopsy and direct fluorescent antibody shows rabies antigen.

What is the management of choice?

- ○ **ICU admission and intensive cardiopulmonary evaluation**
- ○ **Rabies vaccine**
- ○ **Wound cleansing and debridement**
- ● **Human rabies immunoglobulin and Rabies vaccine**
- ○ **Human rabies immunoglobulin**

## Description

Before the onset of rabies symptoms; passive immunization with human rabies immunoglobulin (HRIG) and active immunization with rabies vaccine (if already immunized; 2 further doses of vaccine should be given).

Intensive cardiopulmonary supportive care is the only treatment available for patients with symptomatic rabies.

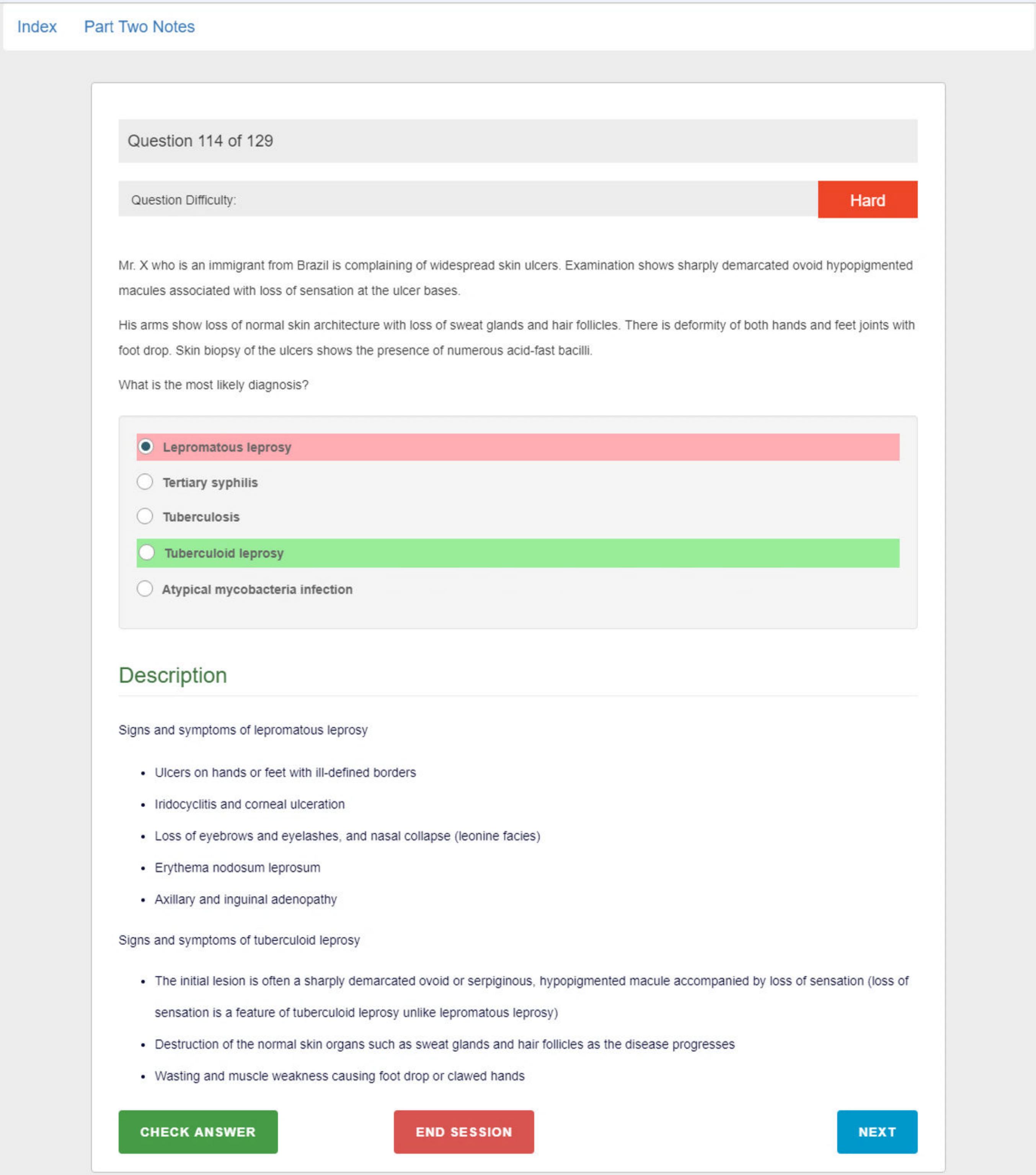
## Session Statistics

**Answered**: 112

✓ **Correct**: 21

✕ **Incorrect**: 91

**Average Score**: 18.75 %



Question 114 of 129

Question Difficulty: **Hard**

Mr. X who is an immigrant from Brazil is complaining of widespread skin ulcers. Examination shows sharply demarcated ovoid hypopigmented macules associated with loss of sensation at the ulcer bases.

His arms show loss of normal skin architecture with loss of sweat glands and hair follicles. There is deformity of both hands and feet joints with foot drop. Skin biopsy of the ulcers shows the presence of numerous acid-fast bacilli.

What is the most likely diagnosis?

● **Lepromatous leprosy**
○ **Tertiary syphilis**
○ **Tuberculosis**
○ **Tuberculoid leprosy**
○ **Atypical mycobacteria infection**

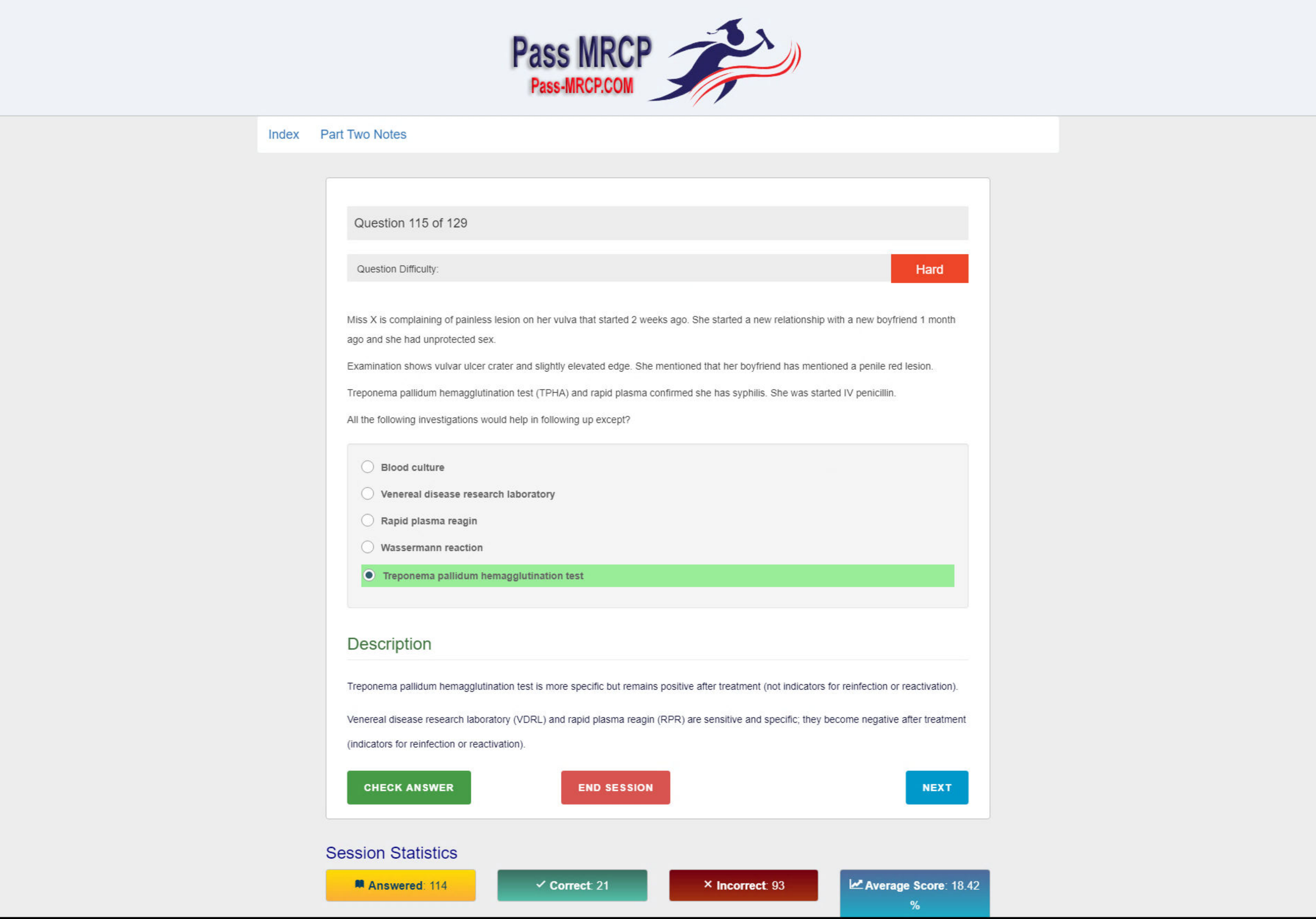
## Description

Signs and symptoms of lepromatous leprosy

- Ulcers on hands or feet with ill-defined borders
- Iridocyclitis and corneal ulceration
- Loss of eyebrows and eyelashes, and nasal collapse (leonine facies)
- Erythema nodosum leprosum
- Axillary and inguinal adenopathy

Signs and symptoms of tuberculoid leprosy

- The initial lesion is often a sharply demarcated ovoid or serpiginous, hypopigmented macule accompanied by loss of sensation (loss of sensation is a feature of tuberculoid leprosy unlike lepromatous leprosy)
- Destruction of the normal skin organs such as sweat glands and hair follicles as the disease progresses
- Wasting and muscle weakness causing foot drop or clawed hands



Question 115 of 129

Question Difficulty: **Hard**

Miss X is complaining of painless lesion on her vulva that started 2 weeks ago. She started a new relationship with a new boyfriend 1 month ago and she had unprotected sex.

Examination shows vulvar ulcer crater and slightly elevated edge. She mentioned that her boyfriend has mentioned a penile red lesion.

Treponema pallidum hemagglutination test (TPHA) and rapid plasma confirmed she has syphilis. She was started IV penicillin.

All the following investigations would help in following up except?

- ○ **Blood culture**
- ○ **Venereal disease research laboratory**
- ○ **Rapid plasma reagin**
- ○ **Wassermann reaction**
- ● **Treponema pallidum hemagglutination test**

## Description

Treponema pallidum hemagglutination test is more specific but remains positive after treatment (not indicators for reinfection or reactivation).

Venereal disease research laboratory (VDRL) and rapid plasma reagin (RPR) are sensitive and specific; they become negative after treatment (indicators for reinfection or reactivation).

## Session Statistics

**Answered**: 114

✓ **Correct**: 21

✕ **Incorrect**: 93

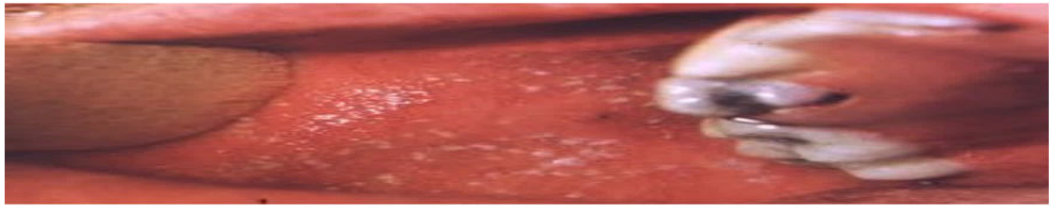
**Average Score**: 18.42 %

Question 116 of 129

Question Difficulty: **Hard**

Mr. X is complaining of fever, red eye and cough for 4 days.

Examination show blanching erythematous papules on his face, trunk and arms with some hyperpigmented patches. His mouth shows gray papular lesions on the buccal mucosa shown in the image. His eye shows conjunctivitis.



What is the most likely causative organism?

● **Measles virus**
○ **Staph aureus**
○ **Mumps virus**
○ **Rubella virus**
○ **Parvovirus B19**

## Description

Measles (rubeola) is one of the most contagious infectious diseases. It is considered primarily a childhood illness but it can affect people of all ages. It is manifested by:

- Prodromal phase of high fever and the classic triad of conjunctivitis, cough and coryza
- Koplik spots (pathognomonic) is bluish-gray specks on a red base that develops on the buccal mucosa opposite the second molars, it appears 1-2 days before the rash and last 3-5 days
- Blanching, erythematous macules and papules begin on the face, on the sides of the neck and behind the ears and spread cephalocaudally to the trunk and extremities; it lasts for 5-7 days before fading into coppery-brown hyperpigmented patches and then desquamates

Rubella is differentiated from measles by the absence of Koplik spots.

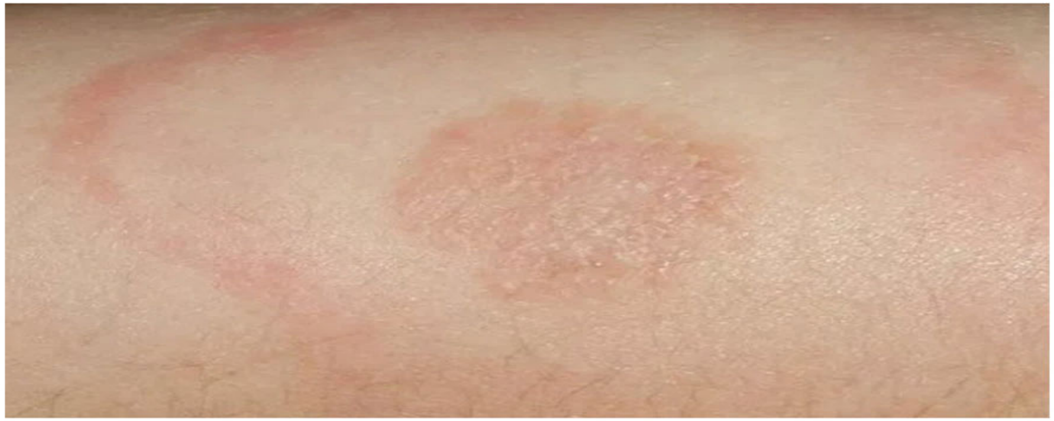
CHECK ANSWER END SESSION NEXT

## Question 117 of 129

Question Difficulty: **Hard**

Mr. X is complaining of neck stiffness, dropped face and arthralgia for 10 days.

Examination shows bilateral facial nerves palsy. There is an erythematous circular rash on his Knee about 7 inches in diameter with central clearing as in the image. CSF analysis shows meningitis with frequent lymphocytes.



Which of the following procedure would be diagnostic?

○ **Polymerase chain reaction**

○ **Blood culture**

○ **Blood film**

○ **Bone marrow biopsy**

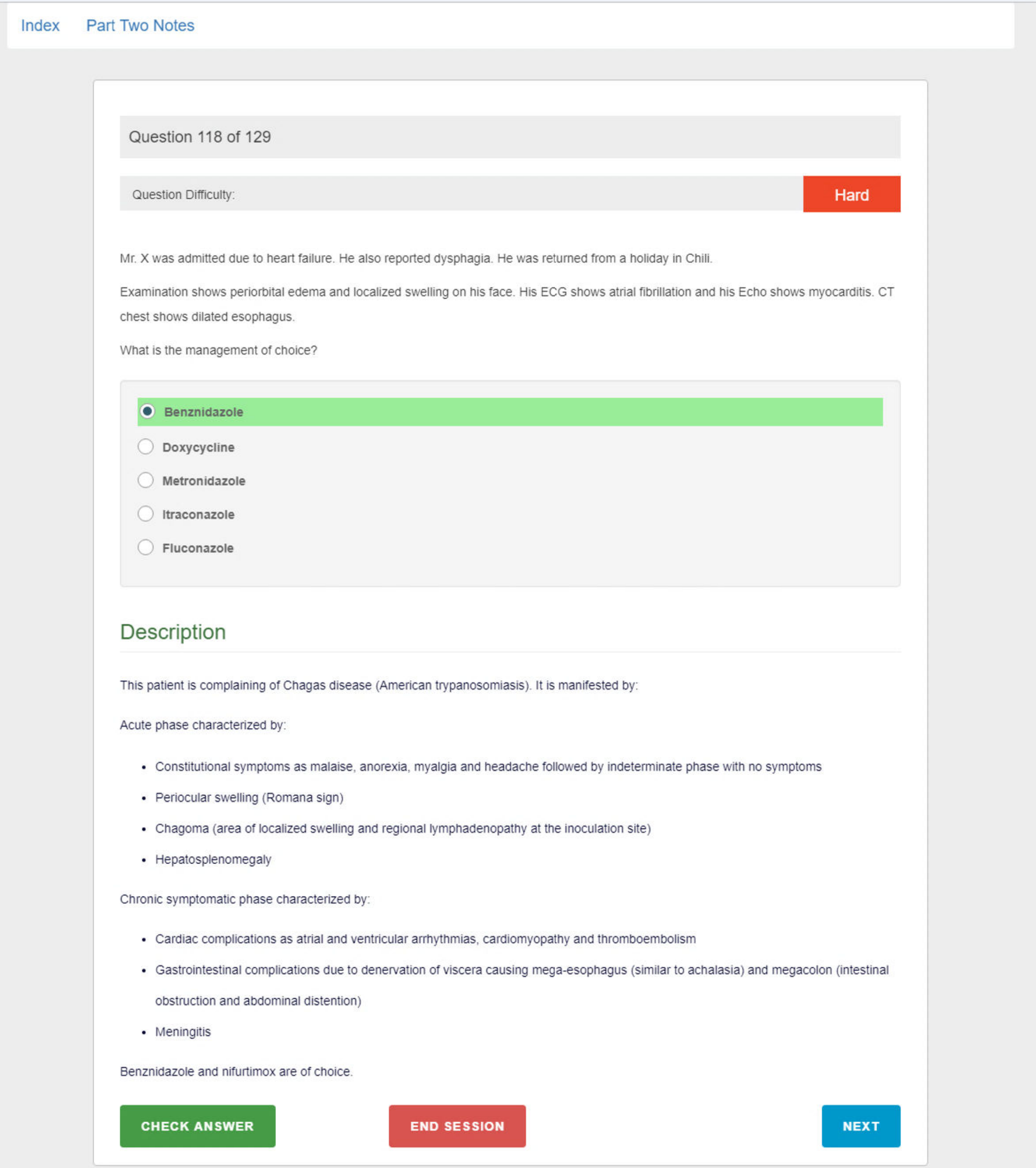
● **ELISA test**

## Description

This patient is complaining of Lyme disease. It is a multisystem illness caused by infection with the spirochete Borrelia burgdorferi. It is transmitted to humans via tick bites. It is manifested by:

- Erythema migrans (circular red rash with central clearing that slowly expands)
- Conjunctivitis
- Myocarditis and heart block
- Meningitis; CSF analysis shows raised lymphocytes and proteins with low glucose
- Facial nerve palsy
- Polyarthritis

Serologic testing (ELISA or Western blot) is diagnostic



Question 118 of 129

Question Difficulty: **Hard**

Mr. X was admitted due to heart failure. He also reported dysphagia. He was returned from a holiday in Chili.

Examination shows periorbital edema and localized swelling on his face. His ECG shows atrial fibrillation and his Echo shows myocarditis. CT chest shows dilated esophagus.

What is the management of choice?

● **Benznidazole**

○ **Doxycycline**

○ **Metronidazole**

○ **Itraconazole**

○ **Fluconazole**

## Description

This patient is complaining of Chagas disease (American trypanosomiasis). It is manifested by:

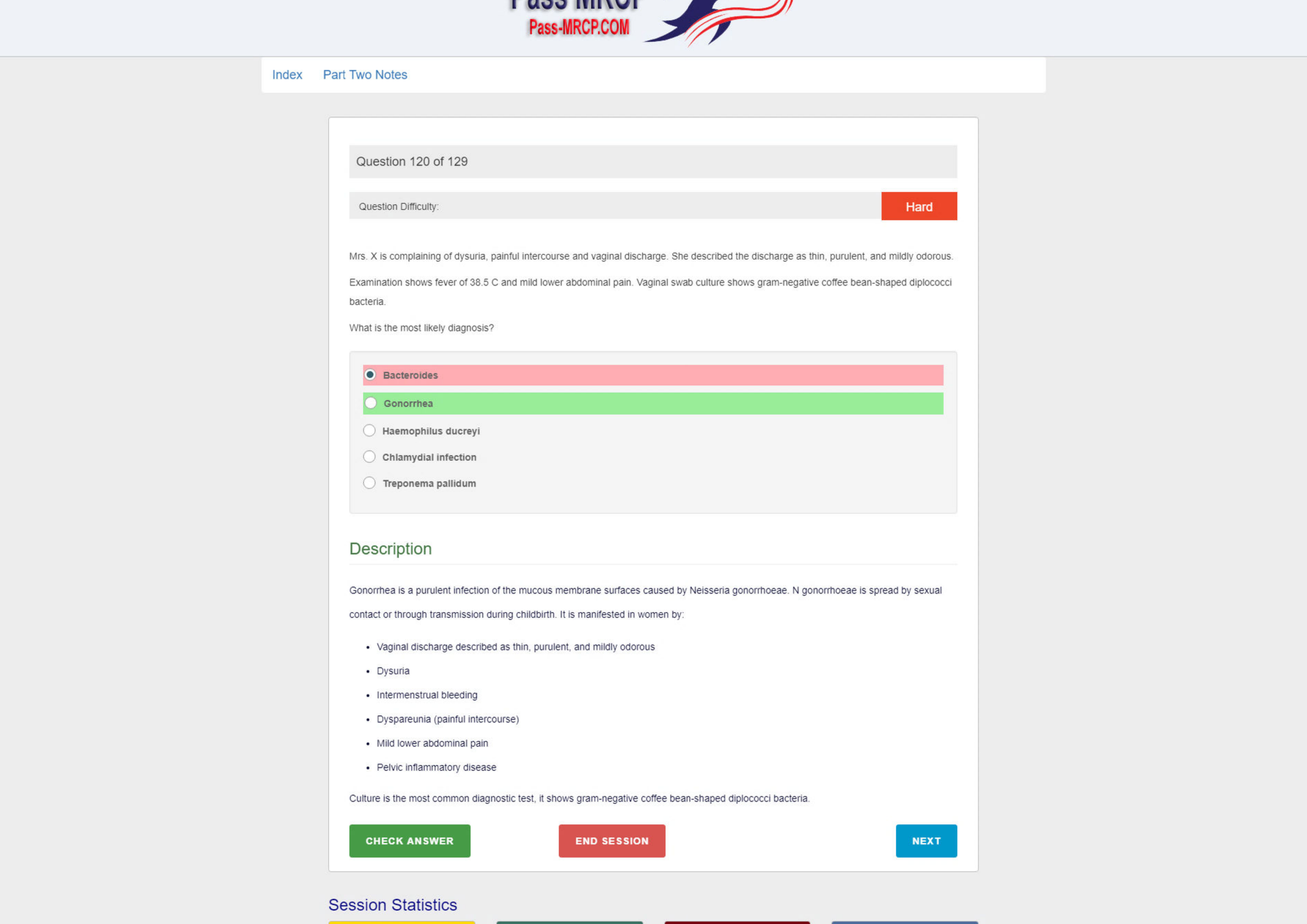
Acute phase characterized by:

- Constitutional symptoms as malaise, anorexia, myalgia and headache followed by indeterminate phase with no symptoms
- Periocular swelling (Romana sign)
- Chagoma (area of localized swelling and regional lymphadenopathy at the inoculation site)
- Hepatosplenomegaly

Chronic symptomatic phase characterized by:

- Cardiac complications as atrial and ventricular arrhythmias, cardiomyopathy and thromboembolism
- Gastrointestinal complications due to denervation of viscera causing mega-esophagus (similar to achalasia) and megacolon (intestinal obstruction and abdominal distention)
- Meningitis

Benznidazole and nifurtimox are of choice.



Question 120 of 129

Question Difficulty: **Hard**

Mrs. X is complaining of dysuria, painful intercourse and vaginal discharge. She described the discharge as thin, purulent, and mildly odorous.

Examination shows fever of 38.5 C and mild lower abdominal pain. Vaginal swab culture shows gram-negative coffee bean-shaped diplococci bacteria.

What is the most likely diagnosis?

● **Bacteroides**

○ **Gonorrhea**

○ **Haemophilus ducreyi**

○ **Chlamydial infection**

○ **Treponema pallidum**

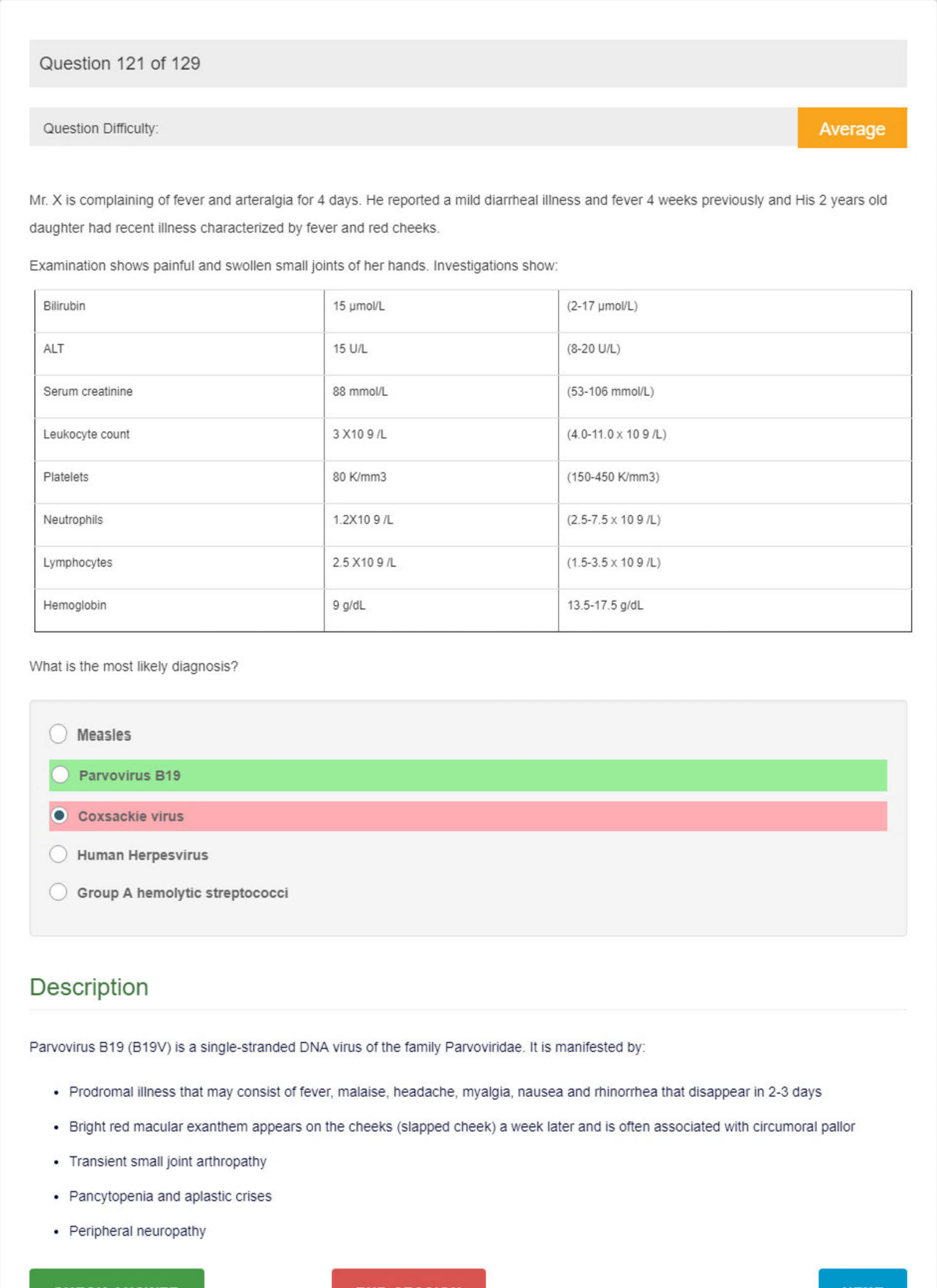
## Description

Gonorrhea is a purulent infection of the mucous membrane surfaces caused by Neisseria gonorrhoeae. N gonorrhoeae is spread by sexual contact or through transmission during childbirth. It is manifested in women by:

- Vaginal discharge described as thin, purulent, and mildly odorous
- Dysuria
- Intermenstrual bleeding
- Dyspareunia (painful intercourse)
- Mild lower abdominal pain
- Pelvic inflammatory disease

Culture is the most common diagnostic test, it shows gram-negative coffee bean-shaped diplococci bacteria.

Session Statistics



Question 121 of 129

Question Difficulty: **Average**

Mr. X is complaining of fever and arteralgia for 4 days. He reported a mild diarrheal illness and fever 4 weeks previously and His 2 years old daughter had recent illness characterized by fever and red cheeks.

Examination shows painful and swollen small joints of her hands. Investigations show:

| | | |
|---|---|---|
| Bilirubin | 15 µmol/L | (2-17 µmol/L) |
| ALT | 15 U/L | (8-20 U/L) |
| Serum creatinine | 88 mmol/L | (53-106 mmol/L) |
| Leukocyte count | 3 X10 9 /L | (4.0-11.0 x 10 9 /L) |
| Platelets | 80 K/mm3 | (150-450 K/mm3) |
| Neutrophils | 1.2X10 9 /L | (2.5-7.5 x 10 9 /L) |
| Lymphocytes | 2.5 X10 9 /L | (1.5-3.5 x 10 9 /L) |
| Hemoglobin | 9 g/dL | 13.5-17.5 g/dL |

What is the most likely diagnosis?

○ **Measles**

○ **Parvovirus B19**

● **Coxsackie virus**

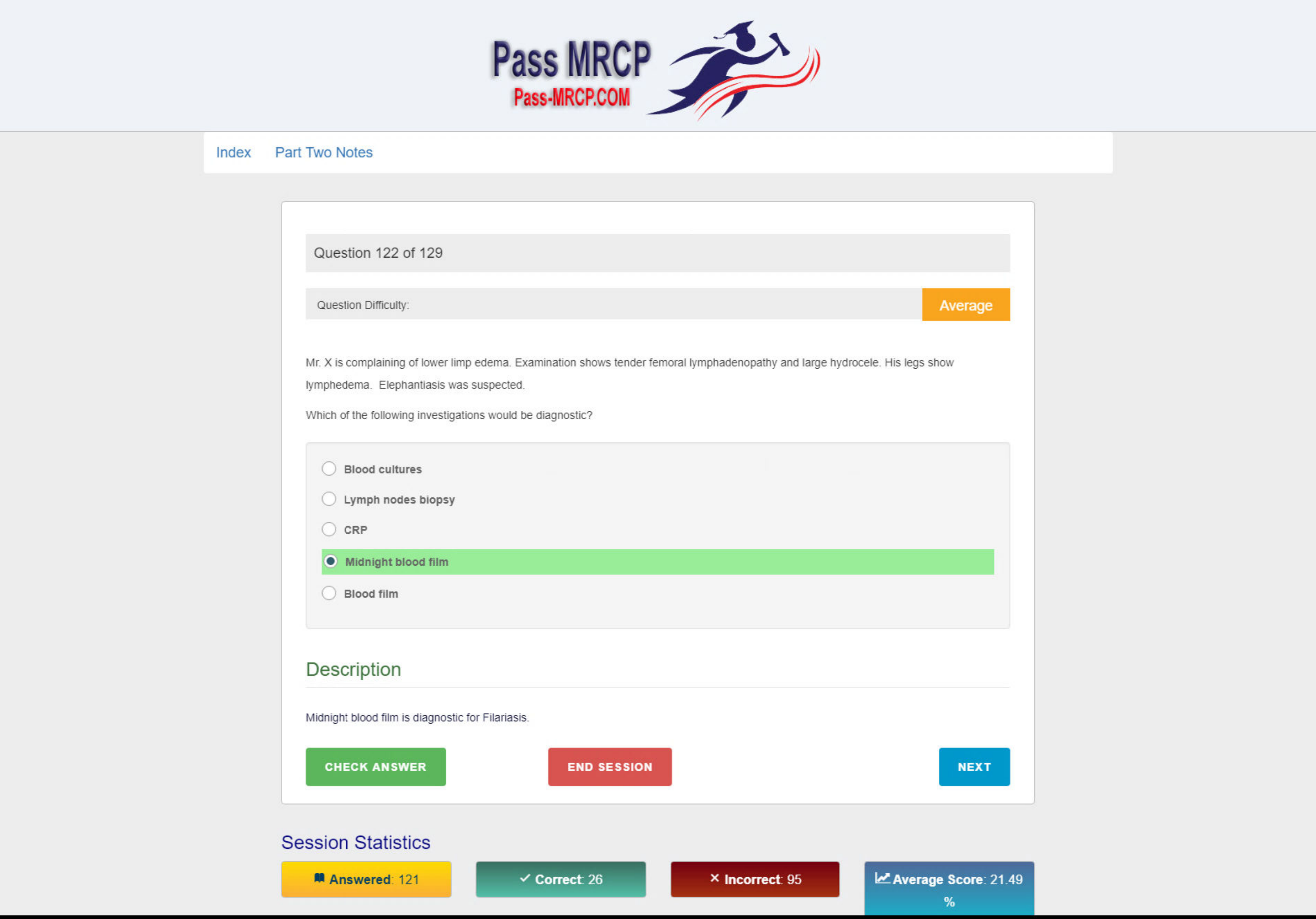
○ **Human Herpesvirus**

○ **Group A hemolytic streptococci**

## Description

Parvovirus B19 (B19V) is a single-stranded DNA virus of the family Parvoviridae. It is manifested by:

- Prodromal illness that may consist of fever, malaise, headache, myalgia, nausea and rhinorrhea that disappear in 2-3 days
- Bright red macular exanthem appears on the cheeks (slapped cheek) a week later and is often associated with circumoral pallor
- Transient small joint arthropathy
- Pancytopenia and aplastic crises
- Peripheral neuropathy



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Question 122 of 129

Question Difficulty: Average

Mr. X is complaining of lower limp edema. Examination shows tender femoral lymphadenopathy and large hydrocele. His legs show lymphedema. Elephantiasis was suspected.

Which of the following investigations would be diagnostic?

○ Blood cultures
○ Lymph nodes biopsy
○ CRP
● Midnight blood film
○ Blood film

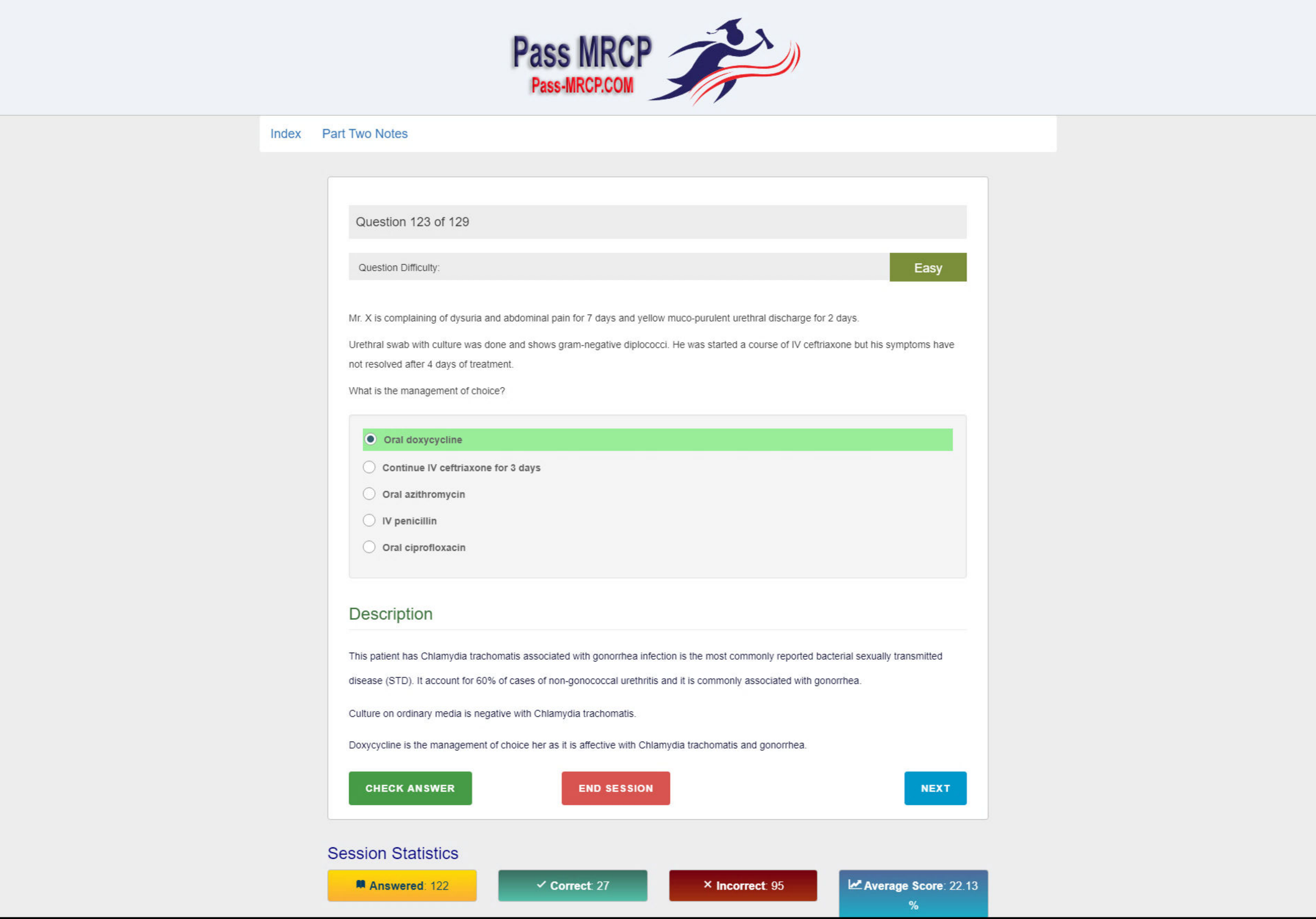
## Description

Midnight blood film is diagnostic for Filariasis.

CHECK ANSWER
END SESSION
NEXT

## Session Statistics

**Answered**: 121
✓ **Correct**: 26
× **Incorrect**: 95
**Average Score**: 21.49 %



Question 123 of 129

Question Difficulty: Easy

Mr. X is complaining of dysuria and abdominal pain for 7 days and yellow muco-purulent urethral discharge for 2 days.

Urethral swab with culture was done and shows gram-negative diplococci. He was started a course of IV ceftriaxone but his symptoms have not resolved after 4 days of treatment.

What is the management of choice?

- ● **Oral doxycycline**
- ○ **Continue IV ceftriaxone for 3 days**
- ○ **Oral azithromycin**
- ○ **IV penicillin**
- ○ **Oral ciprofloxacin**

## Description

This patient has Chlamydia trachomatis associated with gonorrhea infection is the most commonly reported bacterial sexually transmitted disease (STD). It account for 60% of cases of non-gonococcal urethritis and it is commonly associated with gonorrhea.

Culture on ordinary media is negative with Chlamydia trachomatis.

Doxycycline is the management of choice her as it is affective with Chlamydia trachomatis and gonorrhea.

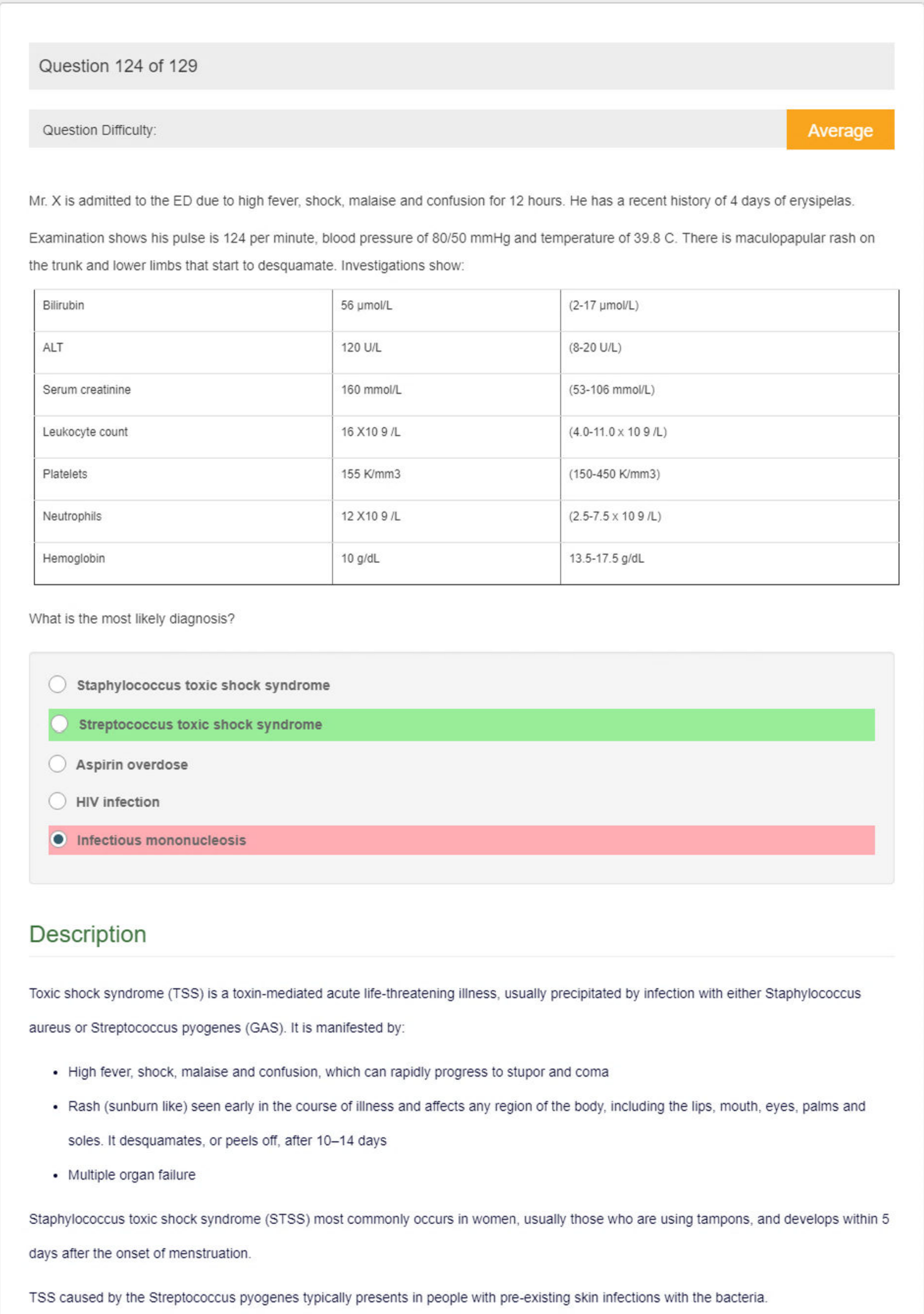
## Session Statistics

**Answered**: 122

✓ **Correct**: 27

✕ **Incorrect**: 95

**Average Score**: 22.13 %



Question 124 of 129

Question Difficulty:

Mr. X is admitted to the ED due to high fever, shock, malaise and confusion for 12 hours. He has a recent history of 4 days of erysipelas.

Examination shows his pulse is 124 per minute, blood pressure of 80/50 mmHg and temperature of 39.8 C. There is maculopapular rash on the trunk and lower limbs that start to desquamate. Investigations show:

| | | |
|---|---|---|
| Bilirubin | 56 µmol/L | (2-17 µmol/L) |
| ALT | 120 U/L | (8-20 U/L) |
| Serum creatinine | 160 mmol/L | (53-106 mmol/L) |
| Leukocyte count | 16 X10 9 /L | (4.0-11.0 x 10 9 /L) |
| Platelets | 155 K/mm3 | (150-450 K/mm3) |
| Neutrophils | 12 X10 9 /L | (2.5-7.5 x 10 9 /L) |
| Hemoglobin | 10 g/dL | 13.5-17.5 g/dL |

What is the most likely diagnosis?

○ **Staphylococcus toxic shock syndrome**

○ **Streptococcus toxic shock syndrome** 🟩

○ **Aspirin overdose**

○ **HIV infection**

● **Infectious mononucleosis** 🟥

## Description

Toxic shock syndrome (TSS) is a toxin-mediated acute life-threatening illness, usually precipitated by infection with either Staphylococcus aureus or Streptococcus pyogenes (GAS). It is manifested by:

- High fever, shock, malaise and confusion, which can rapidly progress to stupor and coma
- Rash (sunburn like) seen early in the course of illness and affects any region of the body, including the lips, mouth, eyes, palms and soles. It desquamates, or peels off, after 10–14 days
- Multiple organ failure

Staphylococcus toxic shock syndrome (STSS) most commonly occurs in women, usually those who are using tampons, and develops within 5 days after the onset of menstruation.

TSS caused by the Streptococcus pyogenes typically presents in people with pre-existing skin infections with the bacteria.

Question 125 of 129

Question Difficulty: **Hard**

Mr. X is complaining of myalgia, rash, headache and conjunctivitis. He also reported severe neck stiffness. He works in a stable and has no medical history except hypertension.

Examination shows positive Kernig sign and hepatosplenomegaly. Investigations show:

| | | |
|---|---|---|
| Bilirubin | 62 µmol/L | (2-17 µmol/L) |
| ALT | 160 U/L | (8-20 U/L) |
| Serum creatinine | 98 mmol/L | (53-106 mmol/L) |
| Leukocyte count | 12 X10 9 /L | (4.0-11.0 x 10 9 /L) |
| Platelets | 160 K/mm3 | (150-450 K/mm3) |
| Neutrophils | 8 X10 9 /L | (2.5-7.5 x 10 9 /L) |

CSF shows elevated protein, low glucose and increased neutrophils. CSF culture shows Leptospira.

What is the management of choice?

○ **Benzylpenicillin**

○ **Ciprofloxacin**

● **Metronidazole**

○ **Co-trimoxazole**

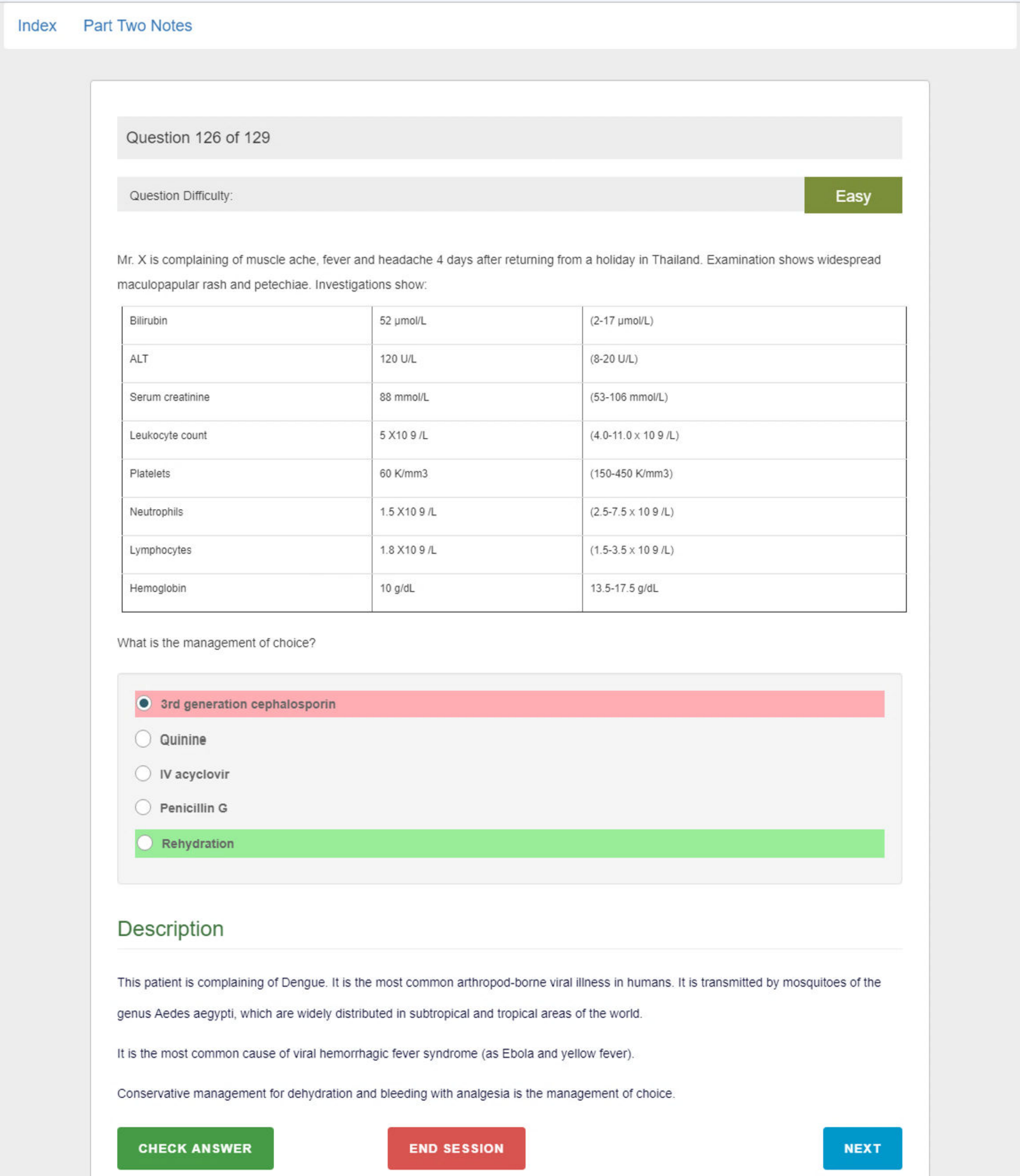
○ **Erythromycin**

## Description

This patient is complaining of Weil disease. It is a severe illness of leptospirosis with manifestations including:

- Jaundice with hepatomegaly and splenomegaly
- Renal failure
- Meningitis
- Myocarditis
- Hemorrhage

Doxycycline, ampicillin or amoxicillin for mild cases of Leptospirosis but IV penicillin G or third-generation cephalosporins for are indicated for severe cases as this case.



Question 126 of 129

Question Difficulty: **Easy**

Mr. X is complaining of muscle ache, fever and headache 4 days after returning from a holiday in Thailand. Examination shows widespread maculopapular rash and petechiae. Investigations show:

| | | |
|---|---|---|
| Bilirubin | 52 μmol/L | (2-17 μmol/L) |
| ALT | 120 U/L | (8-20 U/L) |
| Serum creatinine | 88 mmol/L | (53-106 mmol/L) |
| Leukocyte count | 5 X10 9 /L | (4.0-11.0 x 10 9 /L) |
| Platelets | 60 K/mm3 | (150-450 K/mm3) |
| Neutrophils | 1.5 X10 9 /L | (2.5-7.5 x 10 9 /L) |
| Lymphocytes | 1.8 X10 9 /L | (1.5-3.5 x 10 9 /L) |
| Hemoglobin | 10 g/dL | 13.5-17.5 g/dL |

What is the management of choice?

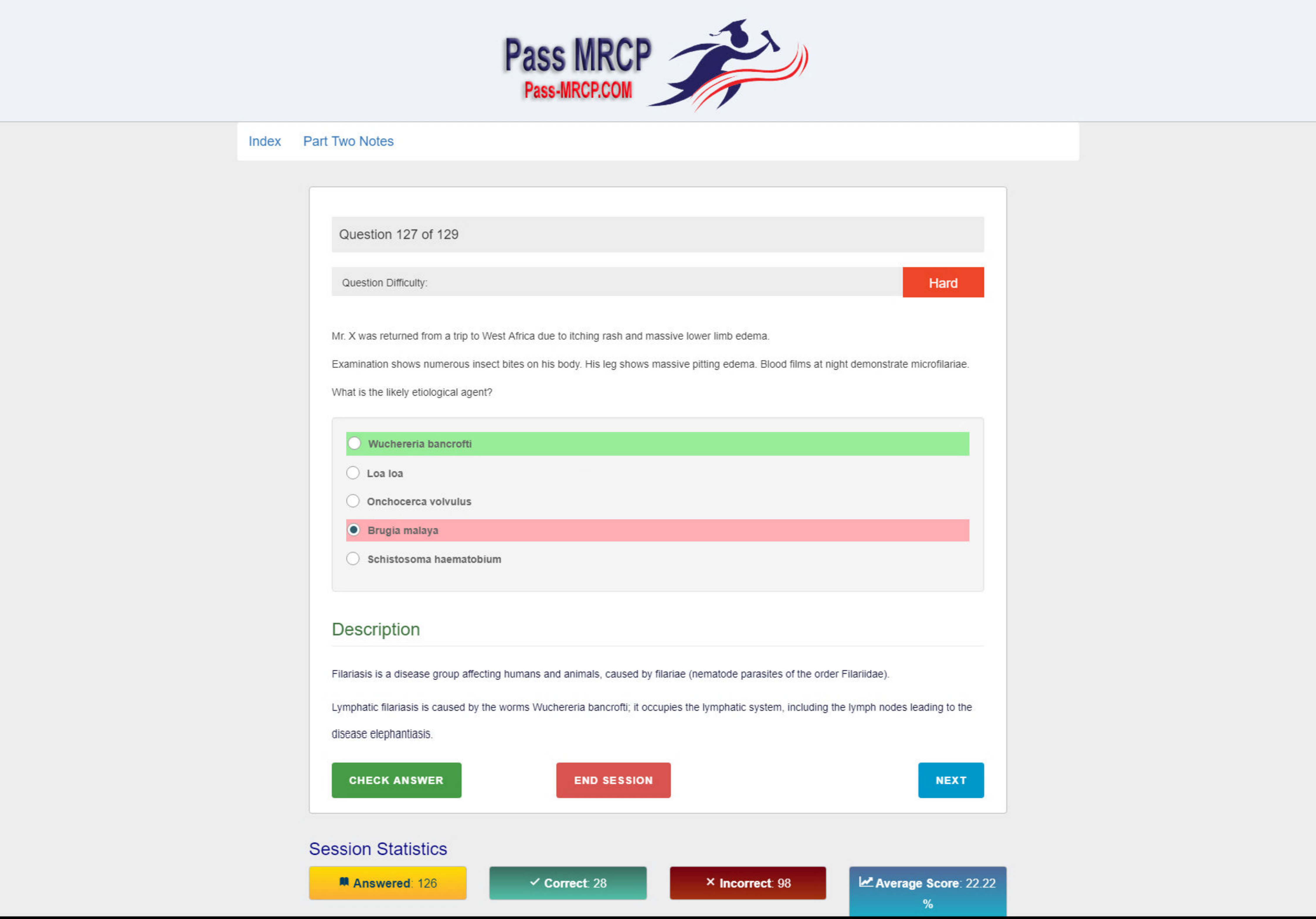
- ● **3rd generation cephalosporin**
- ○ **Quinine**
- ○ **IV acyclovir**
- ○ **Penicillin G**
- ○ **Rehydration**

## Description

This patient is complaining of Dengue. It is the most common arthropod-borne viral illness in humans. It is transmitted by mosquitoes of the genus Aedes aegypti, which are widely distributed in subtropical and tropical areas of the world.

It is the most common cause of viral hemorrhagic fever syndrome (as Ebola and yellow fever).

Conservative management for dehydration and bleeding with analgesia is the management of choice.



Question 127 of 129

Question Difficulty: Hard

Mr. X was returned from a trip to West Africa due to itching rash and massive lower limb edema.

Examination shows numerous insect bites on his body. His leg shows massive pitting edema. Blood films at night demonstrate microfilariae.

What is the likely etiological agent?

- ○ **Wuchereria bancrofti**
- ○ **Loa loa**
- ○ **Onchocerca volvulus**
- ● **Brugia malaya**
- ○ **Schistosoma haematobium**

## Description

Filariasis is a disease group affecting humans and animals, caused by filariae (nematode parasites of the order Filariidae).

Lymphatic filariasis is caused by the worms Wuchereria bancrofti; it occupies the lymphatic system, including the lymph nodes leading to the disease elephantiasis.

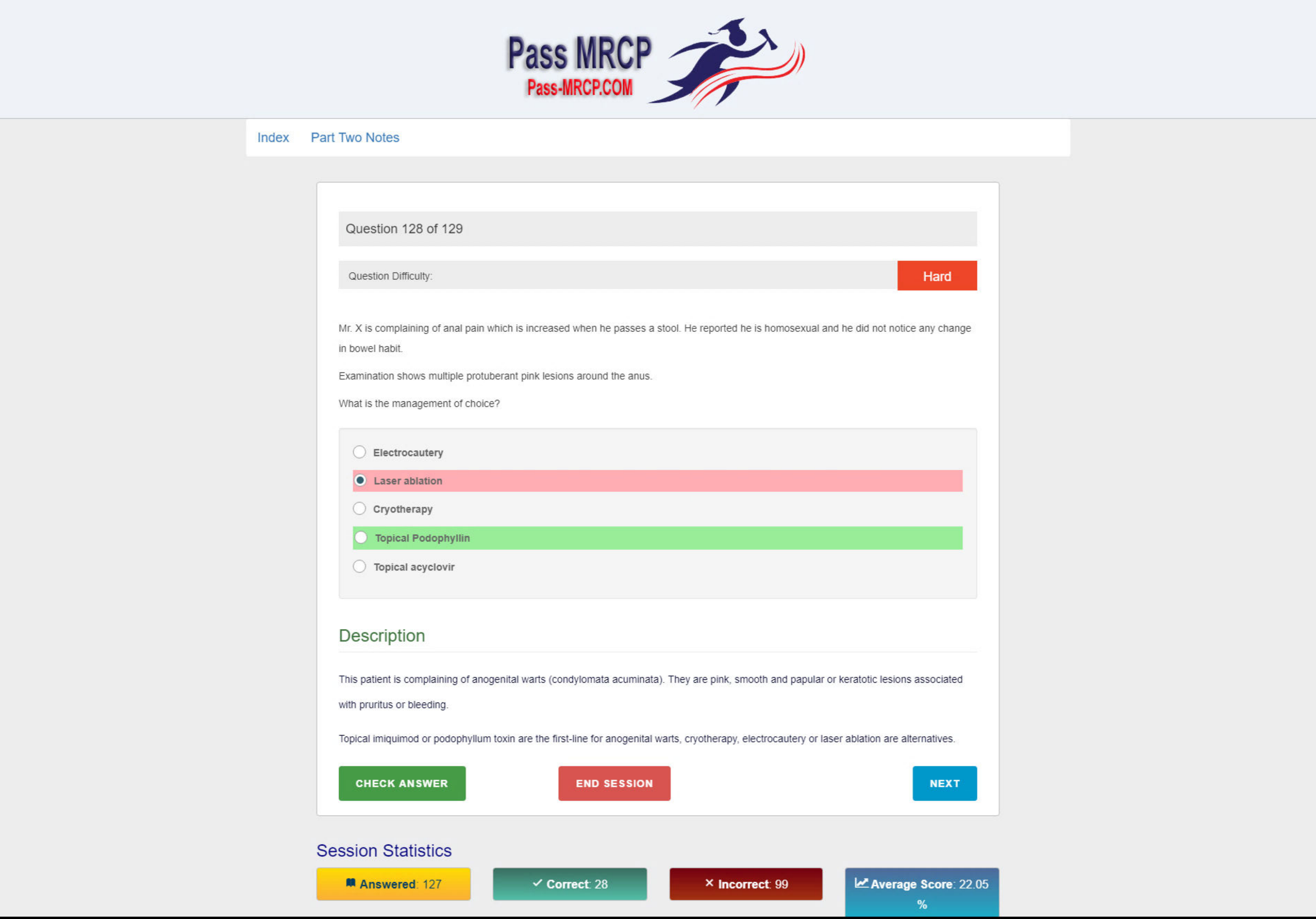
### Session Statistics

**Answered**: 126

✓ **Correct**: 28

✕ **Incorrect**: 98

**Average Score**: 22.22 %



Question 128 of 129

Question Difficulty: **Hard**

Mr. X is complaining of anal pain which is increased when he passes a stool. He reported he is homosexual and he did not notice any change in bowel habit.

Examination shows multiple protuberant pink lesions around the anus.

What is the management of choice?

- ○ **Electrocautery**
- ● **Laser ablation**
- ○ **Cryotherapy**
- ○ **Topical Podophyllin**
- ○ **Topical acyclovir**

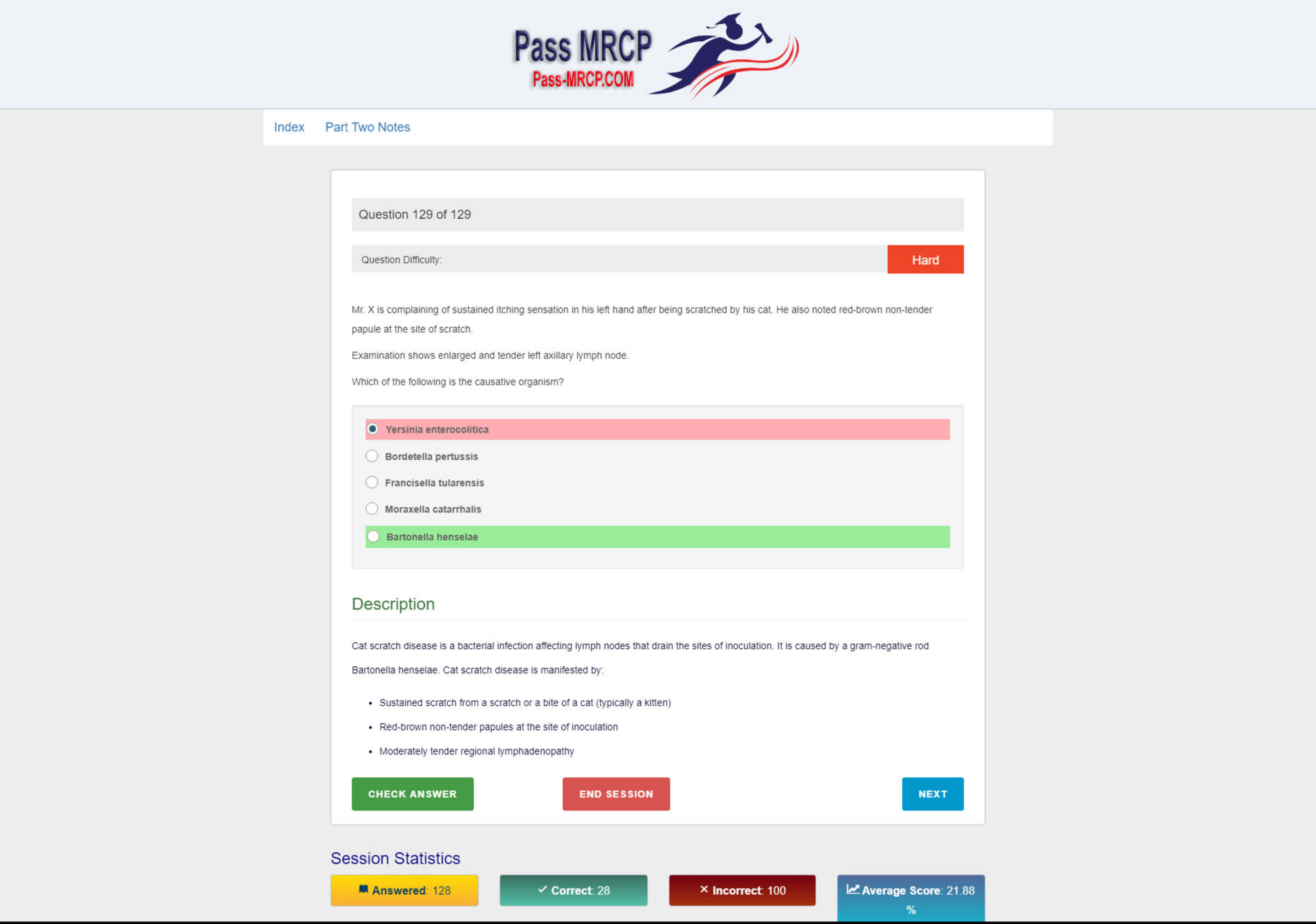
## Description

This patient is complaining of anogenital warts (condylomata acuminata). They are pink, smooth and papular or keratotic lesions associated with pruritus or bleeding.

Topical imiquimod or podophyllum toxin are the first-line for anogenital warts, cryotherapy, electrocautery or laser ablation are alternatives.

Session Statistics

**Answered**: 127
✓ **Correct**: 28
✕ **Incorrect**: 99
**Average Score**: 22.05 %



Question 129 of 129

Question Difficulty: Hard

Mr. X is complaining of sustained itching sensation in his left hand after being scratched by his cat. He also noted red-brown non-tender papule at the site of scratch.

Examination shows enlarged and tender left axillary lymph node.

Which of the following is the causative organism?

● **Yersinia enterocolitica**
○ **Bordetella pertussis**
○ **Francisella tularensis**
○ **Moraxella catarrhalis**
○ **Bartonella henselae**

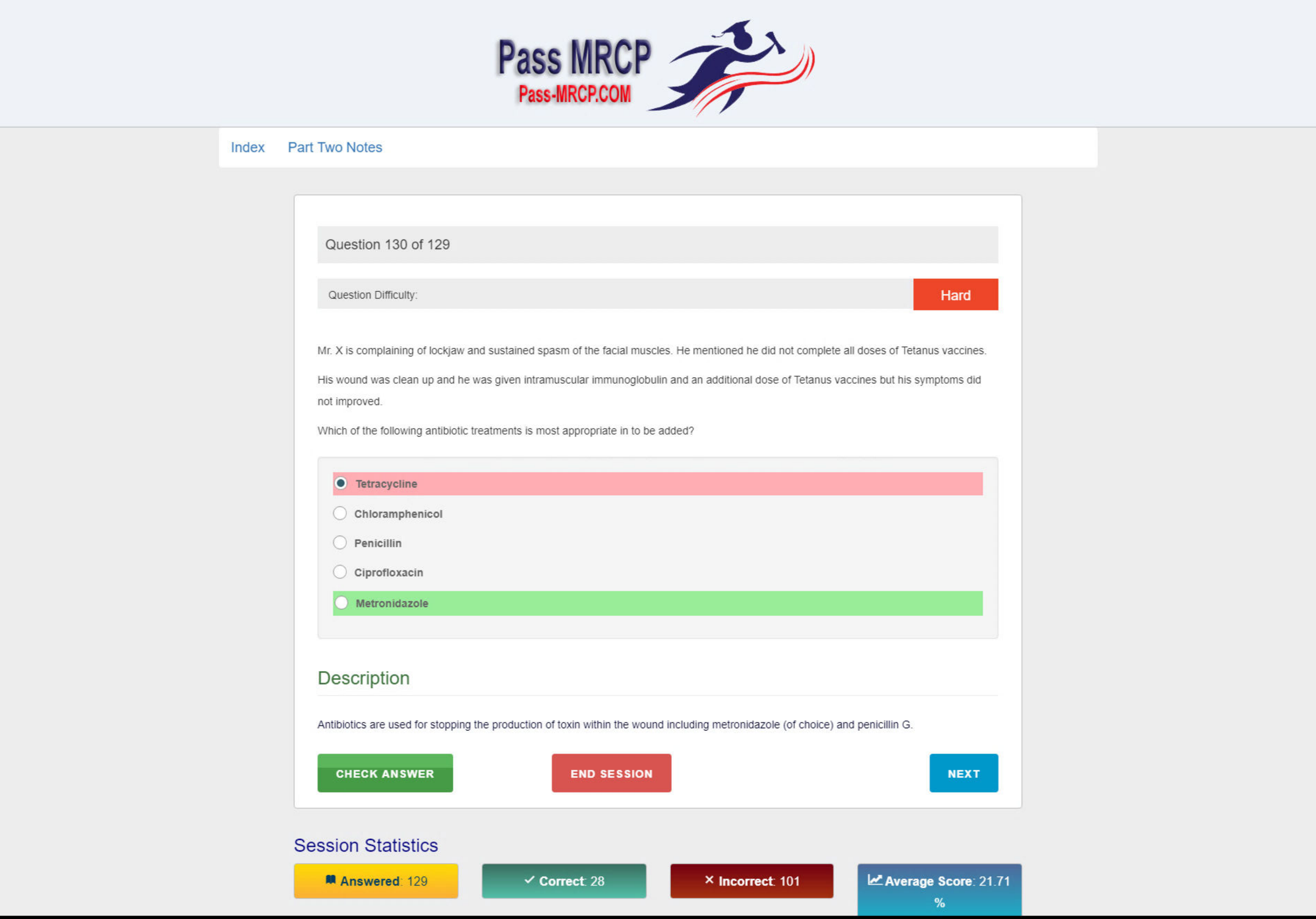
## Description

Cat scratch disease is a bacterial infection affecting lymph nodes that drain the sites of inoculation. It is caused by a gram-negative rod Bartonella henselae. Cat scratch disease is manifested by:

- Sustained scratch from a scratch or a bite of a cat (typically a kitten)
- Red-brown non-tender papules at the site of inoculation
- Moderately tender regional lymphadenopathy

Session Statistics

**Answered**: 128
✓ **Correct**: 28
× **Incorrect**: 100
**Average Score**: 21.88 %



Question 130 of 129

Question Difficulty: Hard

Mr. X is complaining of lockjaw and sustained spasm of the facial muscles. He mentioned he did not complete all doses of Tetanus vaccines.

His wound was clean up and he was given intramuscular immunoglobulin and an additional dose of Tetanus vaccines but his symptoms did not improved.

Which of the following antibiotic treatments is most appropriate in to be added?

- ● Tetracycline
- ○ Chloramphenicol
- ○ Penicillin
- ○ Ciprofloxacin
- ○ Metronidazole

## Description

Antibiotics are used for stopping the production of toxin within the wound including metronidazole (of choice) and penicillin G.

Session Statistics

Answered: 129

✓ Correct: 28

✕ Incorrect: 101

Average Score: 21.71 %